Appendix J

HYDROLOGY AND WATER QUALITY REPORT

HYDROLOGY AND WATER QUALITY REPORT
(QUALITATIVE ANALYSIS)
IN SUPPORT OF ENVIRONMENTAL IMPACT REPORT
FOR
SAN YSIDRO COMMUNITY PLAN UPDATE
CITY OF SAN DIEGO
SAN DIEGO COUNTY, CALIFORNIA

PTS # 310690

Job Number 16657

September 14, 2015
Revised: January 29, 2016
Revised: February 23, 2016
Revised: July 27, 2016

RICK
ENGINEERING COMPANY

HYDROLOGY AND WATER QUALITY REPORT
(QUALITATIVE ANALYSIS)
IN SUPPORT OF ENVIRONMENTAL IMPACT REPORT
FOR
SAN YSIDRO COMMUNITY PLAN UPDATE EIR
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SAN DIEGO COUNTY, CALIFORNIA

PTS # 310690

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HYDROLOGY AND WATER QUALITY REPORT
(QUALITATIVE ANALYSIS)
IN SUPPORT OF ENVIRONMENTAL IMPACT REPORT
FOR
SAN YSIDRO COMMUNITY PLAN UPDATE

REVISION PAGE

July 27, 2016

This page summarizes a revision to the February 23, 2016 report pursuant to the City of San Diego Storm Water Division's additional comments on the Draft EIR. The following text identifies the plan check comment along with the response.

1. (Page 1, paragraph 2) – Suggest revising to "western" instead of "westerly" to be clearer to the reader.

   The word "westerly" on Page 1 has been revised with "western" to provide more clarity.

2. (Page 4, Northwest Drainage Region) – Suggest revising to "flows into" or "meets" instead of "confluence" to be clearer to the reader. Also, specify which aforementioned channel.

   The word "confluence" has been replaced with "flows into" to provide more clarity.

3. (Page 5, Floodplains) – Is that also the year that the most recent FEMA analysis was made? Are the most recently published FEMA data included in the exhibit? The most recent analysis would seem most important to include in the Existing Conditions section.

The most recently published FEMA data is dated May 16, 2012. This information is provided in Attachment C of this report.

4. (Page 6, first paragraph) – This section on Floodplains refers to the Tijuana River "Watershed," but then states that a "floodway has not been defined." Please define these 3 terms and say how they relate to each other in order to help clarify this section.

   The word "Tijuana River watershed" in this report is used to describe a drainage area that drains to the Tijuana River. The term "floodplain" refers to an area of land adjacent to a stream or river that stretches from the banks or its channel to the base of the enclosing valley walls and experiences flooding during periods of high discharge. Depending on how a stream or river is mapped by FEMA, a floodplain includes a "floodway", which consists of the stream channel and adjacent areas that actively carry flood flows downstream, and the flood fringe, which are areas inundated by the flood, but do not experience a strong current. Text has been updated to add this clarification note.

5. (Page 7, Local (On-Site) Storm Water Quality) – Here and elsewhere the term "redevelopment" is used. This could create confusion with reference to projects implemented by the City's Redevelopment Agency, which was dissolved in 2012. Thus, may want to use the term "development" or clarify that "redevelopment" refers to rebuilding at an already developed site in a generic sense, assuming that's the case.

   In order to avoid confusion with reference to projects implemented by the City's Redevelopment Agency, the term "development" was generally substituted for "redevelopment" in the text.

6. (Page 10, first paragraph) – Change "water(s)" to "waters," and "is/are" to "are."

Text has been updated accordingly.

7. (Page 16, General Construction Permit) – Clarify this does not include regular maintenance activities performed to restore the original line, grade, or capacity of the facility.

   Text has been updated accordingly to provide clarification.

8. (Page 22, Alterations to Tijuana River and Old Tijuana River) – Include CDFW Section 1600 Streambed Alteration Agreement, and CCC Coastal Development Permit (part of San Ysidro lies within the coastal zone). Consultation with USFWS may be needed as well since protected wildlife species such as Least Bell's Vireo have been documented in the area and have nearby critical habitat.

   Text has been updated accordingly.

9. (Page 27, last sentence) – This section of the code specifically applies to "all proposed development."

   Text has been updated accordingly.

HYDROLOGY AND WATER QUALITY REPORT

(QUALITATIVE ANALYSIS)
IN SUPPORT OF ENVIRONMENTAL IMPACT REPORT
FOR
SAN YSIDRO COMMUNITY PLAN UPDATE

REVISION PAGE

February 23, 2016

This page summarizes a revision to the January 19, 2016 report pursuant to the City of San Diego's direction to use the name "San Ysidro Historic Village Specific Plan" rather than "El Pueblito Viejo Village Specific Plan." Therefore, the references in this report have been updated accordingly.

HYDROLOGY AND WATER QUALITY REPORT
(QUALITATIVE ANALYSIS)
IN SUPPORT OF ENVIRONMENTAL IMPACT REPORT
FOR
SAN YSIDRO COMMUNITY PLAN UPDATE

REVISION PAGE

January 29, 2016

This page summarizes a revision to the September 14, 2015 report pursuant to the City of San Diego's LDR-Engineering (Env) Cycle 6 EIR Screen Check comments (PTS # 310690), dated December 7, 2015. The following text identifies the plan check comment along with the response.

1. Engineering Review supports the context of the Hydrology and Water Quality Report (Appendix J) and section 4.10 because they discuss the existing MS4 permit and the recently adopted by San Diego Water Board Order No. R9-2013-0001, NPDES No. CAD0109266, National Pollutant Discharge Elimination System (NPDES) Permit and Waste Discharge Requirements for the Discharges from the Municipal Separate Storm Sewer System (MS4) draining the watersheds within the San Diego Region. (Continued below) (New Issue).

   Comment Acknowledged.

2. (Continued) The summary discusses projects will be required to adhere to the City of San Diego Storm Water Standards in effect at the time of submittal. (New Issue).

   Comment Acknowledged.

3. The Hydrology and Water Quality Report should be revised to state that the new Storm Water Development Regulations will become effective on February 16, 2016. (New Issue).

Applicable sections in the report have been revised to reference the new effective date of February 16, 2016.

4. The Hydrology and Water Quality Report (Appendix J) should be revised to replace references to "discretionary approval" with "development approval" on pages 12, 21, and 28. (New Issue).

   Pages 12, 25, and 28 have been revised accordingly.

5. Please revise the Hydrology and Water Quality Report (Appendix J) page 27: Council Policy 600-14 has been repealed and replaced by City of San Diego Municipal Code Section 143.0145 and 143.0146. (New Issue).

   The reference to Council Policy 600-14 (repealed) has been removed in the report.

6. Section 4.10 should be revised to replace the reference to "discretionary approval" with "development approval" on pages 4.10-8. (New Issue).

   Section 4.10 has been revised accordingly.

7. This completes Engineering Review's review of this submittal; additional conditions may be recommended pending further review or any modification to the community plan update. (New Issue).

   Comment acknowledged.

1.0 INTRODUCTION

This report describes drainage and storm water quality conditions within the Community of San Ysidro in the City of San Diego, California. The San Ysidro Community includes approximately 1,863 acres (or 2.9 square miles) and is bounded by the Otay Mesa-Nestor Community and State Route 905 (SR-905) in the north, by the Tijuana River Valley Community in the west, by the Otay Mesa Community in the east, and by the International Border with Mexico in the south, in the City of San Diego. See Attachment A for location of the San Ysidro Community. This report is in support of the Programmatic Environmental Impact Report (PEIR) for the San Ysidro Community Plan and Local Coastal Program Land Use Plan (herein referred to as the "San Ysidro Community Plan Update"). The San Ysidro Community Plan Update will update land use policies in order to create a plan for future development within the Community.

In general, storm water runoff from a majority of San Ysidro drains in a southwesterly direction to the Tijuana River and is conveyed through the Tijuana River Valley to the Tijuana River Estuary along the southern edge of San Diego, California, ultimately discharging to the Pacific Ocean. The flow path of the Tijuana River does not go through the San Ysidro Community; however, its tributary, known as the Old Tijuana River, is located in a western portion of the Community. Runoff from the San Ysidro Community is conveyed towards the Tijuana River via drainage facilities that are located north of the international border; therefore, runoff from the San Ysidro Community is not anticipated to drain to Mexico.

The storm water drainage analysis, Section 2.0, provides a qualitative description of local existing runoff patterns within San Ysidro and floodplain hydrology for the Tijuana River. The storm water quality analysis, Section 3.0, provides a qualitative description of local existing storm water quality, receiving water characteristics, and sensitivity of the receiving waters. Section 4.0 describes current regulations, policies and programs applicable to storm water drainage, floodplain management, and storm water quality in the City of San Diego that will dictate design criteria and standards for future

development projects within San Ysidro. Section 5.0 provides qualitative description of existing drainage characteristics and water quality conditions specific to San Ysidro Historic Village Specific Plan (SYHVSP) area of the San Ysidro Community. Section 6.0 provides qualitative description of potential drainage and storm water quality impacts as a result of future development within the San Ysidro Community and identify policy-level mitigation.

2.0 EXISTING DRAINAGE CONDITIONS

In general, storm water runoff from a majority of San Ysidro drains in a southwesterly direction towards the Tijuana River and is conveyed through the Tijuana River Valley to the Tijuana Estuary, ultimately discharging to the Pacific Ocean. For the purpose of this qualitative discussion, the San Ysidro Community can be subdivided into three (3) Drainage Regions based on the drainage characteristics towards the Tijuana River: Southeast, Central, and Northwest. Attachment B contains a Drainage Region Map, which identifies three (3) Drainage Regions, including locations of existing channels, storm drains and local discharge locations from urbanized area to creek, to depict how storm water from each Drainage Region drains to the Tijuana River.

Local (On-Site / Off-site) Drainage

San Ysidro is mostly developed and is highly impervious. Nearly all rainfall can be expected to become runoff because there are minimal opportunities for infiltration. Typical runoff response from highly impervious areas is flashy with high peak flow rates for short durations. Storm water runoff originating in San Ysidro is conveyed to the receiving waters in streets, gutters, cross gutters, open channels, and storm drain systems. Existing storm drain and channel locations are shown on the exhibit in Attachment B.

Approximate drainage areas associated with the three (3) Drainage Regions within the San Ysidro Community boundary are 137 acres, 1551 acres, and 175 acres, respectively. Off-site storm water runoff from portions of Otay Mesa-Nestor Community and Otay Mesa Community are commingled with onsite storm water runoff and conveyed through the San Ysidro Community via a network of existing storm drain systems and open channels towards the Tijuana River. Each of the three (3) Drainage Region is discussed in more details below:

Southeast Drainage Region

Storm water runoff from the Southeast Drainage Region, including off-site runoff from a southwesterly portion of the Otay Mesa Community, is conveyed in a southwesterly direction towards the Tijuana River via a network of existing storm drain systems and existing open channels located along the perimeter of an existing parking lot at the northwest of the U.S. – Mexico border entry in the vicinity of Virginia Avenue and Louisiana Street. This discharge point is shown in Attachment B "Drainage Region Map for San Ysidro Community – Preliminary." The discharge point is labeled as the local discharge (from urbanized area to creek) location number 1 on the exhibit in Attachment B.

Central Drainage Region

Storm water runoff from the Central Drainage Region, including off-site runoff from a westerly portion of the Otay Mesa Community, is conveyed via a network of existing storm drain systems and open channels in a westerly direction towards the Old Tijuana River Channel (a tributary channel of the Tijuana River), which is bounded by Interstate 5 to the north and Camino De La Plaza to the south. The Central Drainage Region contains approximately six (6) local discharge locations within its drainage boundary. These discharge points, labeled as local discharge location numbers 2, 3, 4, 5, 6, and 7, are shown on the exhibit in Attachment B.

Northwest Drainage Region

Storm water runoff from a portion of the Northwest Drainage Region is conveyed via existing storm drain systems in a southwesterly direction towards an existing open channel south of Interstate 5. The channel travels in a westerly direction off-site and eventually flows into the Tijuana River. Storm water runoff from the remaining portion of the Northwest Drainage Region travels in a northwesterly direction and discharges to

another open channel that eventually flows into the aforementioned existing channel that travels westerly and flows into the Tijuana River. The Northwest Drainage Region contains two (2) local discharge locations. These discharge points, labeled as local discharge location numbers 8 and 9, are shown on the exhibit in Attachment B.

Floodplains

The Tijuana River has been studied and documented in the Federal Emergency Management Agency (FEMA) "Flood Insurance Study for San Diego County, California and Unincorporated Areas," (FIS). The initial FEMA analyses were performed for the Tijuana River in 1979. An exhibit showing FEMA Flood Zones and copies of FIRMettes, which show portions of the FIRM Panels that include the San Ysidro Community, are included in Attachment C. The exhibit included in Attachment C is dated May 16, 2012, which shows the most recent FEMA data (at the authoring of this report). The FIRMettes are annotated with the San Ysidro Community boundary and other pertinent information. Note that a FIRMette is a full-scale section of a FEMA Flood Insurance Rate Map (FIRM) that can be created online and is formatted to fit on printers (i.e., 8.5"x11" or 11"x17" paper size).

The San Ysidro Community is located in the City of San Diego, Community Number 060295 on the FIRMs, and appears on a FIRM Panel: 06073C 2166 G.

Tijuana River

Based on the FIS, the Tijuana River watershed encompasses approximately 1,700 square miles, measured to the Pacific Ocean. Drainage from this watershed is conveyed to the Pacific Ocean via open channels downstream of the San Ysidro Community. The flow path of the Tijuana River does not go through the San Ysidro Community; however, the Old Tijuana River (a tributary of the Tijuana River) is located west-central area of the Community. The 100-year floodplain of the Old Tijuana River Channel affects a west-

central area of the San Ysidro Community. In addition, the 500-year floodplain of the Tijuana River affects a significant portion of the southwesterly area of the San Ysidro Community. This is shown on FEMA FIRM Panel Number 06073C 2166G. FEMA Flood Zones within the portion of the San Ysidro Community include Zone AE and Zone X, shown on FEMA FIRM Panel Number 06073C 2166 G (see the FIRMette included in Attachment C). At the authoring of this report, FEMA has not defined a floodway within the San Ysidro Community. "Zone AE" is a Special Flood Hazard Areas (SFHA) that represents a "1-percent-annual-chance floodplains," and these base flood elevations (BFEs) are determined for the Flood Insurance Study (FIS) by a detailed method of analysis. "Zone X" is a flood insurance rate zone that corresponds to the areas between the limits of the base flood and the 0.2-percent-annual-chance (or 500-year) flood.

Note: The word "Tijuana River watershed" in this report is used to describe a drainage area that drains to the Tijuana River. The term "floodplain" refers to an area of land adjacent to a stream or river that stretches from the banks or its channel to the base of the enclosing valley walls and experiences flooding during periods of high discharge. Depending on how a stream or river is mapped by FEMA, a floodplain includes a "floodway", which consists of the stream channel and adjacent areas that actively carry flood flows downstream, and the flood fringe, which are areas inundated by the flood, but do not experience a strong current. In other words, a floodplain is an area near a stream or a river which floods when the water level reaches flood stage.

Generally, the 100-year flooding associated with the Old Tijuana River Channel affects the west-central area of San Ysidro, which is bounded by the Interstate 5 to the north, Camino De La Plaza to the south, and Dairy Mart to the west. Based on review of the currently available SanGIS layer (i.e. – City of San Diego 2-foot contours), it appears that buildings and existing homes on the northerly and southerly sides of the Old Tijuana River Channel are at least a few feet higher than the base flood elevation. In regards to future developments that could be subject to inundation within the San Ysidro Community, refer to regulations and policies in Section 4.0 of this report.

3.0 EXISTING WATER QUALITY CONDITIONS

Local ("On-Site") Storm Water Quality

San Ysidro is mostly developed and is highly impervious. Land uses include a mixture of residential, commercial business, industrial uses, governmental agencies / institutional, park, and open spaces. Typical pollutants that can be expected from these land uses include sediment, nutrients, heavy metals, organic compounds, trash and debris, oxygen demanding substances, oil and grease, bacteria and viruses, and pesticides. Because storm water runoff originating in San Ysidro is conveyed to the receiving water (i.e., the Tijuana River) in streets, gutters, cross gutters, and storm drain systems with little to no opportunity for infiltration, all of the pollutants in runoff originating in San Ysidro can be expected to be conveyed to the receiving water. The only exception would be storm water runoff from industrial sites that have implemented best management practices required by the Industrial Storm Water General Permit or individual waste discharge requirements (WDRs) issued by the California Regional Water Quality Control Board San Diego Region (SDRWQCB), or from development projects constructed within approximately the last twelve (12) years, since the City of San Diego adopted their Storm Water Standards Manual in 2003, potentially requiring certain development projects classified as "Priority Development Projects" to include permanent post-construction BMPs in the project. The majority of existing development in San Ysidro was established prior to adoption of storm water regulations requiring protection and treatment of storm water runoff. Therefore, there are few existing BMPs for protection of storm water runoff quality.

Receiving Waters

The receiving water for the San Ysidro Community is the Tijuana River and its tributary, Old Tijuana River. Attachment B contains a Drainage Region Map, which identifies three (3) Drainage Regions and locations of existing channels and storm drains, to show how storm water from each Drainage Region drains to the Tijuana River. According to the

"Water Quality Control Plan for the San Diego Basin (9)" (1994 and amendments) (herein referred to as the "Basin Plan"), the project is located in the following hydrologic basin planning areas:

- **911.11**: Tijuana Hydrologic Unit (911), Tijuana Valley Hydrologic Area (.1), San Ysidro Hydrologic Subarea (.11). The Tijuana River is in this hydrologic basin planning area.
- **911.12**: Tijuana Hydrologic Unit (911), Tijuana Valley Hydrologic Area (.1), Water Tanks Hydrologic Subarea (.12). The Tijuana River is located immediately downstream of this hydrologic basin planning area.

Beneficial Uses of Receiving Waters

Beneficial uses are the uses of water necessary for the survival or wellbeing of humans, plants and wildlife. These uses of water serve to promote the tangible and intangible economic, social, and environmental goals of humankind. Water quality objectives and beneficial uses can be found in the Basin Plan.

Beneficial Uses for Tijuana River

Based on the Basin Plan, the following beneficial uses have been identified for the Tijuana River in Hydrologic Unit Basin Number 911.11: Non-contact Water Recreation (REC-2), Warm Freshwater Habitat (WARM), Wildlife Habitat (WILD), Preservation of Biological Habitats of Special Significance (BIOL) and Rare, Threatened, or Endangered Species (RARE) are existing beneficial uses. Industrial Service Supply (IND) and Contact Water Recreation (REC-1) are potential beneficial uses. These inland surface waters are excluded from the Municipal and Domestic Supply (MUN) beneficial use.

Beneficial Uses for Tijuana River Estuary

Based on the Basin Plan, the following beneficial uses have been identified for the Tijuana River Estuary in Hydrologic Unit Basin Number 911.11: Contact Water

Recreation (REC-1), Non-contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Biological Habitats of Special Significance (BIOL), Estuarine Habitat (EST), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Marine Habitat (MAR), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction and/or Early Development (SPWN), and Shellfish Harvesting (SHELL) are existing beneficial uses.

Beneficial Uses for Pacific Ocean

Based on the Basin Plan, the following beneficial uses have been identified for Pacific Ocean: Industrial Service Supply (IND), Navigation (NAV), Contact Water Recreation (REC-1), Non-contact Water Recreation (REC-2), Commercial and Sport Fishing (COMM), Preservation of Biological Habitats of Special Significance (BIOL), Wildlife Habitat (WILD), Rare, Threatened, or Endangered Species (RARE), Marine Habitat (MAR), Aquaculture (AQUA), Migration of Aquatic Organisms (MIGR), Spawning, Reproduction, and/or Early Development (SPWN), and Shellfish Harvesting (SHELL) are existing beneficial uses.

303(d) List

Under Section 303(d) of the 1972 Clean Water Act, states, territories and authorized tribes are required to develop a list of water quality limited segments. These waters on the list do not meet water quality standards, even after point sources of pollution have installed the minimum required levels of pollution control technology. The law requires that the above-mentioned jurisdictions establish priority rankings for water on the lists and develop action plans, called Total Maximum Daily Loads (TMDLs), to improve water quality.

Numerous studies of receiving water quality and sediment quality in San Diego Bay have been performed by several agencies, and the studies have found that beneficial uses are

impacted by the existing water quality conditions. As a result the receiving waters have been listed for several pollutants and TMDLs are in place or in progress.

On November 12, 2010, the United States Environmental Protection Agency (USEPA) approved the inclusion of all waters to California's 2010 303(d) List of impaired waters requiring Total Maximum Daily Loads (TMDLs) and disapproved the omission of several water bodies and associated pollutants that meet federal listing requirements. USEPA provided public notice and the opportunity for public comment on the proposed additions which ended December 23, 2010. On October 11, 2011, USEPA issued its final decision regarding the water bodies and pollutants USEPA added to California's 2010 303(d) List. This replaces the 2006 California Water Act (CWA) Section 303(d) List as California's current 303(d) List. The receiving waters for the project that are currently listed as impaired based on the 2010 303(d) List are: Tijuana River, Tijuana River Estuary, and Pacific Ocean Shoreline, Tijuana HU. The pollutants/stressors causing impairment of the Tijuana River are Nutrients, Pathogens, Pesticides, Sediments, Metals/Metalloids, Miscellaneous, Other Organics, Toxicity, and Trash. The pollutants/stressors causing impairment of the Tijuana River Estuary are Nutrients, Pathogens, Metals/Metalloids, Pesticides, Trash, and Sediment. The pollutants/stressors causing impairment of Pacific Ocean Shoreline, Tijuana HU, are Pathogens and Other Organics, Excerpts from the 2010 303(d) List, which include the specific locations and potential sources of the surface water impairments, are included in Attachment D.

TMDL Status

A TMDL is a quantitative assessment of water quality problems, contributing sources, and load reductions or control actions needed to restore and protect bodies of water. TMDLs are adopted as amendments to the Basin Plan. The following is the status of existing and planned TMDLs for receiving waters that storm water runoff from the San Ysidro Community drains into.

TMDLs Adopted and Being Implemented

Currently, there are no adopted TMDLs that are being implemented for either the Tijuana River or the Tijuana River Estuary. TMDLs are needed for both water bodies.

TMDLs Adopted and Pending Implementation

There are no TMDLs that have been adopted and that are pending implementation for either the Tijuana River or the Tijuana River Estuary.

TMDLs Currently Being Developed

The SDRWQCB has initiated efforts to develop TMDLs for sediments and trash in the Tijuana River and Estuary. Sediment and trash are causing the impairment of beneficial uses within these water bodies, including EST, MAR, RARE, and others. More information regarding the TMDLs for the Tijuana River Valley and the Tijuana River Estuary can be found via the provided link below:

http://www.waterboards.ca.gov/sandiego/water_issues/programs/tmdls/TijuanaRiverValley.shtml

4.0 CURRENT REGULATIONS, POLICIES AND PROGRAMS

This Section discusses existing policies and regulations that apply to drainage, floodplain management and water quality in the City of San Diego. Future development projects in the San Ysidro Community will be subject to requirements and design criteria outlined in these policies and regulations.

Drainage

Pursuant to San Diego Municipal Code Chapter 14 Article 2 Division 2, Storm Water Runoff and Drainage Regulations, drainage regulations apply to all development in the City of San Diego, whether or not a permit or other approval is required.

Drainage design policies and procedures for the City of San Diego are given in the City of San Diego's "Drainage Design Manual," dated April 1984 (herein referred to as the "Drainage Design Manual"), which is incorporated in the Land Development Manual as Appendix B. The Land Development Manual provides information to assist in the processing and review of applications. The Drainage Design Manual provides a guide for designing drainage and drainage-related facilities for developments within the City of San Diego. Chapter 1 of the Drainage Design Manual outlines basic policies and objectives. Subsequent Chapters provide design criteria. Future development projects in the San Ysidro Community will be required to adhere to these existing criteria.

The City of San Diego will be responsible for reviewing hydrologic and hydraulic studies and design features for conformance to criteria given in the Drainage Design Manual for every map or permit for which development approval is sought from the City of San Diego.

Floodplain Management

National Flood Insurance Program (NFIP)

The NFIP is a Federal program enabling property owners in participating communities to purchase insurance protection against losses from flooding. This insurance is designed to provide an insurance alternative to disaster assistance to meet the escalating costs of repairing damage to buildings and their contents caused by floods. Participation in the NFIP is based on an agreement between local communities and the Federal Government that states if a Community will adopt and enforce a floodplain management ordinance to reduce future flood risks to new construction in Special Flood Hazard Areas (SFHA), the Federal Government will make flood insurance available within the Community as a financial protection against flood losses.

In support of the NFIP, FEMA identifies flood hazard areas throughout the United States and its territories by producing Flood Hazard Boundary Maps (FHBMs), Flood Insurance Rate Maps (FIRMs), and Flood Boundary & Floodway Maps (FBFMs). Several areas of flood hazards are commonly identified on these maps. One of these areas is the Special Flood Hazard Area (SFHA) or high risk area defined as any land that would be inundated by the 100-year flood – the flood having a 1-percent chance of occurring in any given year (also referred to as the base flood). See Attachment C of this document for the SFHAs within the San Ysidro Community. Development may take place within the SFHA, provided that development complies with local floodplain management ordinances, which must meet the minimum Federal requirements.

The City of San Diego is a participating Community in the NFIP. Therefore, the City of San Diego is responsible to adopt a floodplain management ordinance that meets certain minimum requirements intended to reduce future flood losses. The City of San Diego has adopted Development Regulations for Special Flood Hazard Areas (SFHA) in the San Diego Municipal Code Sections 143.0145 and 143.0146. If a development is proposed within one of the SFHA Zones, these existing regulations will apply. A copy of

the regulations is included in Attachment E. The SFHA Zones within San Ysidro are shown on the FIRMettes located in Attachment C. The area approximately between Interstate 5 and Camino De La Plaza is within the SFHA associated with the Old Tijuana River (a tributary channel of Tijuana River).

Storm Water Quality

Pursuant to Section 402 of the Clean Water Act (CWA), the EPA has established regulations under the National Pollutant Discharge Elimination System (NPDES) program to control direct storm water discharges. In California, the State Water Resources Control Board (SWRCB) administers the NPDES permitting programs and is responsible for developing waste discharge requirements. The California Regional Water Quality Control Board San Diego Region (SDRWQCB) also is responsible for developing waste discharge requirements specific to its jurisdiction.

General waste discharge requirements that will directly apply to design and construction of future development projects within the San Ysidro Community, at the authoring of this report will include:

General Construction Permit

- SWRCB Order No. 2009-0009-DWQ National Pollutant Discharge Elimination System (NPDES) General Permit No. CAS000002 Waste Discharge Requirements (WDRs) for Discharges of Storm Water Runoff Associated with Construction Activity (General Construction Permit), adopted September 2, 2009. The permit was previously amended by Order No. 2010-0014-DWQ and then again by Order No. 2012-0006-DWQ. The General Construction Permit is due to be reissued. This permit may be reissued several times during the life of the San Ysidro Community Plan.

Municipal Storm Water Permit

- SDRWQCB Order No. R9-2007-0001, a previous National Pollutant Discharge Elimination System (NPDES) Permit No. CAS0108758, "Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, the San Diego Unified Port District, and the San Diego County Regional Airport Authority" (Order No. R9-2007-0001, or "Municipal Storm Water Permit"), adopted by the SDRWQCB on January 24, 2007 (herein referred to as the "2007 MS4 Permit"). The 2007 MS4 Permit was an update to Order No. 2001-01, National Pollutant Discharge Elimination System (NPDES) No. CAS0108758 "Waste Discharge Requirements for Discharges of Urban Runoff from the Municipal Separate Storm Sewer Systems (MS4s) Draining the Watersheds of the County of San Diego, the Incorporated Cities of San Diego County, and the San Diego Unified Port District" adopted by the SDRWQCB on February 21, 2001 (herein referred to as the "2001 MS4 Permit").
- The most current Municipal Storm Water Permit (2013 MS4 Permit) for Region 9, Order No. R9-2013-0001, was adopted on May 8, 2013 by the San Diego Regional Water Quality Control Board (Regional Board) and became effective on June 27, 2013. This Order was amended by adoption of Order No. R9-2015-0001 on February 11, 2015 and adoption of Order No. R9-2015-0100 on November 18, 2015. This is an

update to the 2007 MS4 Permit, Order No. R9-2007-0001. The implementation of the 2013 MS4 Permit criteria and updates to the City of San Diego Storm Water Standards (based on the Copermittee's Model BMP Design Manual) took place on February 16, 2016. Pending the "Grandfathering" (i.e. – Prior Lawful Approval) requirements, development projects within the San Ysidro Community could be subject to the new 2013 MS4 Permit requirements.

- As part of the requirements in the above referenced 2013 MS4 Permit (by San Diego Regional Board), Water Quality Improvement Plans (WQIPs) were developed for nine (9) watersheds in San Diego Region, including one for the Tijuana River Watershed. In the Tijuana River Watershed, the Responsible Parties include the Cities of Imperial Beach and San Diego and the County of San Diego. The goal of the Tijuana River WQIP is to protect, preserve, enhance, and restore water quality of receiving water bodies. This goal will be accomplished through an adaptive planning and management process that identifies the highest and focused priority water quality conditions within the watershed and implements strategies to achieve improvements in the quality of discharges from the Responsible Parties' storm drain systems.

The following provides more discussion regarding the General Construction Permit and Municipal Storm Water Permit, which will directly affect design and construction of development projects. At the end of this Section is a discussion of other permits that may affect specific activities or project sites.

General Construction Permit

During the construction phase, excluding regular maintenance activities performed to restore the original line, grade, or capacity of the facility, any project that disturbs 1 acre or greater in size, or that disturbs less than 1 acre in size but is part of a larger common plan of development, will be subject to the requirements of the General Construction Permit, or a

future SWRCB Order re-issuing the General Construction Permit. The General Construction Permit was adopted by the SWRCB on September 2, 2009, and is due to be reissued. The permit was amended by Order No. 2010-0014-DWQ and then again by Order No. 2012-0006-DWQ. For coverage by the General Construction Permit, the project owner is required to submit to the SWRCB a Notice of Intent (NOI) to comply with the General Construction Permit, and develop and implement a Storm Water Pollution Prevention Plan (SWPPP) describing best management practices (BMPs) to be used during and after construction to prevent the discharge of sediment and other pollutants in storm water runoff from the project.

Projects less than one acre in size, and not part of a larger common plan of development, are not subject to the requirements of the General Construction Permit. However, in the City of San Diego, construction storm water requirements apply to all new development activities based on the City of San Diego's Storm Water Management and Discharge Control Ordinance (San Diego Municipal Code Section 43.03, et. seq.). Projects less than one acre are required to have a Water Pollution Control Plan (WPCP) which identifies the pollution prevention measures that will be taken.

Municipal Storm Water Permit

The SDRWQCB issues the Municipal Storm Water Permit in order to establish the conditions under which pollutants can be discharged from the storm drain system to local streams, coastal lagoons, and the ocean. The Municipal Storm Water Permit implements requirements of the Clean Water Act (CWA) and Federal NPDES stormwater regulations. The Municipal Storm Water Permit is typically scheduled to be renewed every 5 years. At the authoring of this report, the current Municipal Storm Water Permit in effect that applies in the San Ysidro Community in the City of San Diego is the 2007 MS4 Permit, Order No. R9-2007-0001, adopted January 24, 2007. As mentioned above, the 2013 MS4 Permit (Order No. R9-2013-0001) was adopted by SDWRQCB on May 8, 2013 and became effective on June 27, 2013. This Order was amended by adoption of

Order No. R9-2015-0001 on February 11, 2015 and adoption of Order No. R9-2015-0100 on November 18, 2015. The implementation of the 2013 MS4 Permit criteria and updates to the City of San Diego Storm Water Standards are anticipated after February 16, 2016.

The City of San Diego is a Co-Permittee under the Municipal Storm Water Permit. As a Co-Permittee, the City of San Diego must implement several storm water management programs, including programs designed to control storm water discharges from new development projects. Specific Sections of the Municipal Storm Water Permit that will affect design and construction of development projects include Section D.1, Development Planning Component, and D.2, Construction Component. These titles refer to required components of the City of San Diego's Jurisdictional Urban Runoff Management Program (JURMP), which is one of the programs that must be implemented by the City of San Diego under the Municipal Storm Water Permit. The City of San Diego implements the requirements through their JURMP and "Storm Water Standards Manual." See City of San Diego Storm Water Standards, below. In addition, Section H of the Municipal Permit, Total Maximum Daily Loads, provides requirements for TMDLs. The City of San Diego will also implement these requirements through their Storm Water Standards Manual, and these requirements will affect design of permanent post-construction BMPs.

City of San Diego Storm Water Standards

The City of San Diego's current "Storm Water Standards" is dated January 20, 2012 and is incorporated in the Land Development Manual as Appendix O. As indicated above, it is important to note that the City of San Diego is currently updating the Storm Water Standards Manual, which is anticipated for implementation after February 16, 2016. The Storm Water Standards Manual provides information to project applicants on how to comply with the permanent and construction storm water quality requirements in the City of San Diego.

Significant elements of the Storm Water Standards Manual, which are based on requirements of the Municipal Storm Water, will dictate design elements in development projects. The key elements in the current Storm Water Standards Manual (2012) include:

- **Low Impact Development (LID) BMP Requirements** (Order No. 2007-0001 Section D.1.d.(4), Storm Water Standards Manual Section III.B.1)
- **Source Control BMPs** (Order No. 2007-0001 Section D.1.d.(5), Storm Water Standards Manual Section III.B.2)
- **BMPs Applicable to Individual Priority Development Project Categories** (Order No. 2007-0001 Section D.1.d.(5), Storm Water Standards Manual Section III.B.3)
- **Treatment Control BMPs** (Order No. 2007-0001 Section D.1.d.(6), Storm Water Standards Manual Section III.B.4)

Note: The key elements in the currently updated City of San Diego's Storm Water Standards Manual (to be implemented after February 16, 2016) will continue to include Low Impact Development (LID) BMP and Source Control BMPs. However, the "Treatment Control BMPs" will now be called "Pollutant Control BMPs" and requires Priority Development Projects to implement LID BMPs that are designed to retain (i.e. – intercept, store, infiltrate, evaporate, and evapotranspire). If retention BMPs are determined infeasible, then biofiltration BMPs may be allowed. Furthermore, if biofiltration BMPs are determined infeasible, then the Priority Development Projects may be allowed to use flow-thru treatment control BMPs, provided that an off-site alternative compliance project is available.

LID BMPs will be significant to site planning because these features require area on-site to retain storm water for infiltration, re-use, or evaporation. The 2012 Storm Water Standards Manual states, "For Priority Development Projects, the feasible portion of the post-project runoff volumes and peak flows from the water quality design storm ... shall be infiltrated on-site. If it is shown to be infeasible to infiltrate the requisite volume of

water, that water may be retained on-site for re-use or evapotranspiration. If it is shown to be infeasible to retain the requisite volume of water, then that water must be treated with treatment control BMPs." Although the footprint of the LID BMPs can often be fit in to planned landscaping features, this requires early planning to ensure that the features are located in places where they can intercept the drainage and safely store the water without adverse effects to adjacent slopes, structures, roadways or other features.

The 2012 Storm Water Standards Manual also addresses "Hydromodification – Limitations on Increases of Runoff Discharge Rates and Durations" (Order No. R9-2007-0001 Section D.1.g, Storm Water Standards Manual Appendix K). Hydromodification management plan (HMP) requirements will dictate design elements in locations where downstream channels are susceptible to erosion from increases in storm water runoff discharge rates and durations. Development projects in the San Ysidro Community will typically be exempt from hydromodification management requirements because of the location. Projects discharging into underground storm drains discharging directly to bays or the ocean are exempt from the HMP requirements. Note that the 2013 MS4 Permit has updated the HMP exemption requirements; therefore, certain exemptions that are in the 2007 MS4 Permit will no longer be allowed unless these will be addressed in an analysis called Watershed Management Area Analysis (WMAA), which will be included as an attachment in the study called Water Quality Improvement Plan (WQIP).

Section IV of the "Storm Water Standards Manual," Construction Storm Water BMP Performance Standards, describes the City of San Diego's construction storm water BMP standards, which will apply during the construction of development projects in the San Ysidro Community. This provides minimum requirements for construction site management, inspection and maintenance of construction BMPs, monitoring of the weather and implementation of emergency plans as needed, and provides minimum performance standards including: pollution prevention measures so that [there will be] no measurable increase of pollution (including sediment) in runoff from the site; no slope

erosion; water velocity moving offsite must not be greater than pre-construction levels; and preserve natural hydraulic features and riparian buffers where possible.

Again, it is important to note that the current Storm Water Standards (2012) will be replaced after February 16, 2016 with currently updated version. The City of San Diego's Storm Water Standards Manual is currently updated based on the 2013 MS4 Permit (Order No. R9-2013-0001, as amended by adoption of Order Nos. R9-2015-0001 and R9-2015-0100).

Other Permits

In addition to the permits described above, other permits that may be applicable to specific activities or project sites are described below.

Temporary Groundwater Extraction

The San Diego Water Board has adopted two (2) NPDES Permits that cover groundwater extraction discharges to surface waters in the San Diego Region depending on the location of the discharge. One Permit covers discharges to San Diego Bay, tributaries thereto under tidal influence, and storm drains or other conveyance systems tributary thereto (Order No. R9-2007-0034, NPDES No. CAG919001). Another Permit covers discharges to all other water bodies within the San Diego Region including surface waters, estuaries, and the Pacific Ocean (Order No. R9-2008-0002, NPDES No. CAG919002).

General Industrial Permit

Industrial facilities are subject to the requirements of State Water Resources Control Board Water Quality Order No. 2014-0057-DWQ National Pollutant Discharge Elimination System (NPDES) Permit No. CAS000001, "Waste Discharge Requirements

for Discharges of Storm Water Associated With Industrial Activities Excluding Construction Activities," (General Industrial Permit). This permit was adopted on April 1, 2014 and will expire on June 30, 2020. This permit currently applies to operation of existing industrial facilities associated with ten broad categories of industrial activities, and will apply to operation of proposed new industrial facilities within those ten categories. The General Industrial Permit requires the implementation of storm water management measures and development of a Storm Water Pollution Prevention Plan (SWPPP).

Individual Waste Discharge Requirements

Some existing dischargers (existing ship construction, modification, repair or maintenance facilities) require individual waste discharge requirements for discharge to navigable waters (San Diego Bay). Whether individual waste discharge requirements will be needed for development projects depends on the specific type and location of the development project.

Alterations to Tijuana River or Old Tijuana River

Alteration to the channel of Tijuana River or Old Tijuana River would require permits issued at many levels from federal, state, and local agencies including Section 404 (of the Clean Water Act) Permit from the United States Army Corps of Engineers, Section 401 Water Quality Certification from the SDRWQCB, Streambed Alternation Agreement from the California Department of Fish and Wildlife, and a Coastal Development Permit from the California Coastal Commission. A Section 10 Consultation with the United States Fish and Wildlife Service may be required for potential impacts to bird species covered by the federal Endangered Species Act. Documentation and review under the California Environmental Quality Act (CEQA) would also be required.

Other Programs

City of San Diego General Plan

The City of San Diego's General Plan, "City of San Diego General Plan," adopted in 2008, presents goals and policies for storm water infrastructure in the Public Facilities, Services, and Safety Element (PF), and presents goals and policies for open space (including floodplain management) and urban runoff management in the Conservation Element (CE). The General Plan was amended in 2010, 2012, and again in 2015. Relevant excerpts from the General Plan are included in Attachment E.

5.0 HYDROLOGY AND WATER QUALITY OF SAN YSIDRO HISTORIC VILLAGE

San Ysidro Historic Village Specific Plan (SYHVSP) area lies approximately at the center of the designated Central Drainage Region of San Ysidro. It is bordered by Interstate 5 (I-5) to the south, Interstate 805 (I-805) to the east, Smythe Ave. to the west, and Foothill Rd. to the north. A delineation of the SYHVSP area is shown on the San Ysidro Community Location Map, as well as other maps, in Attachments of this report. Being part of the Central Drainage Region, the SYHVSP area is highly impervious with most of the land use being designated as residential. High peak flows and short durations are the drainage characteristics associated with a highly impervious area.

The SYHVSP area shares similar hydrological and drainage patters as the Central Drainage Region. Runoff is conveyed via a network of existing storm drains in a southwesterly direction towards Old Tijuana River, which is bounded by Interstate 5 (I-5) to the north and Camino De La Plaza to the south. The SYHVSP area is completely outside of the 100-Year floodplain; however, a southerly portion of the area clips the 500-Year FEMA floodplain.

The existing water quality conditions for the SYHVSP area are the same as reflected in Section 3.0 of this report. The SYHVSP area is subject to the City of San Diego's drainage, floodplain management, and storm water quality regulations, policies, and programs presented in Section 4.0 of this report.

6.0 PROPOSED CONDITION AND POLICY-LEVEL MITIGATION

This Section will address how future development projects within the San Ysidro Community (including the SYHVSP area), based on land use policies adopted in the City of San Diego Community Plan Update, could impact drainage and water quality. A copy of the proposed land use map is included in Attachment G. The following thresholds will be addressed:

Drainage Issue 1: Could implementation of the proposed San Ysidro Community Plan Update result in changes in absorption rates, drainage patterns, or the rate of surface runoff?

Water Quality Issue 1: Could implementation of the proposed San Ysidro Community Plan Update result in a substantial increase in pollutant discharge to receiving waters and increase discharge of identified pollutants to an already impaired water body?

Water Quality Issue 2: Could implementation of the proposed Community Plan Update otherwise impact local and regional water quality, including groundwater?

No specific projects are proposed that can be evaluated on a project-level basis. Therefore, this Section will address the general effects of future development projects in the context of existing regulations and the existing condition of the San Ysidro Community.

Drainage Issue 1

Future development projects have the potential to change surface runoff characteristics, including the volume of runoff, rate of runoff, and drainage patterns. An increase in the volume or rate of runoff could result in flooding or erosion. A change in drainage patterns could also result in flooding or erosion. This is evaluated for the local "on-site" perspective, and the watershed perspective (floodplain impacts).

Local ("On-Site") Impacts

Because San Ysidro is highly impervious, the volume or rates of runoff are not likely to be increased by future development projects. It is more likely that the volume and rate of runoff could be slightly decreased due to storm water quality regulations which require implementation of low impact development (LID) practices that retain a portion of storm water on-site for infiltration, re-use, or evaporation.

All projects requiring development approvals from the City of San Diego are subject to LID requirements such as minimizing the impervious footprint, minimizing directly connected impervious areas, and minimizing soil compaction where appropriate. Further, Priority Development Projects (PDPs) as defined by the 2016 City of San Diego Storm Water Standards Manual are subject to specific numeric sizing standards for LID practices. The PDP categories are defined in details in the City of San Diego's Storm Water Standards Manual, dated February 2016. Any Priority Development Projects (PDPs) after February 16, 2016 will be required to design to comply with the updated City of San Diego's Storm Water Standards Manual (i.e. – BMP Design Manual), which is based on the 2013 MS4 Permit. The Priority Development Project LID requirements are also defined in the City of San Diego's Storm Water Standards Manual. It requires that the feasible portion of the post-project runoff volumes and peak flows from a water quality design storm shall be infiltrated on site. If it is shown to be infeasible to infiltrate the requisite volume of water, that water may be retained on-site for re-use or evapotranspiration. If it is shown to be infeasible to retain the requisite volume of water, then that water must be treated with treatment control BMPs. As stated in Section 4.0, the currently updated City of San Diego's Storm Water Standards Manual will have different storm water requirements as compared to the current 2012 version. The 2012 Storm Water Standards Manual defines a specific process that must be followed to determine feasibility or infeasibility. Examples of project features that might be used to meet the requirements are bioretention (biofiltration) areas, cisterns and rain barrels. "Bioretention (biofiltration) areas" can be in many configurations such as rain gardens,

swales, or planter boxes. In urban areas such as San Ysidro they are most likely to be in planter boxes. Bioretention (biofiltration) areas may include underdrains when necessary to protect foundations, slopes, utilities, or other infrastructure from damage from infiltrated water. Even with underdrains, these practices can still reduce runoff volumes by increasing evaporation or evapotranspiration of the stored runoff. Future development projects that adhere to these requirements are likely to reduce the volume and rate of surface runoff compared to the existing condition rather than increase runoff.

All development in the City of San Diego is subject to drainage regulations through the San Diego Municipal Code. These include comparing and coordinating proposed design with existing structures and systems handling the same flows. Future development projects that adhere to this basic objective of the existing drainage regulations would not be expected to change drainage patterns in a manner that would result in flooding or erosion on or off-site.

On a local "on-site" level, adherence to the requirements of the City of San Diego's Drainage Design Manual and Storm Water Standards Manual which require installation of LID practices such as bioretention (biofiltration) areas, cisterns, and/or rain barrels can be expected to improve surface drainage conditions, or at a minimum, to not exacerbate flooding or cause erosion. All of the requirements are effective regardless of the San Ysidro Community Plan Update.

Floodplain Impacts

The San Ysidro Community is located adjacent to the Tijuana River. The river is conveyed through a natural channel which may be susceptible to erosion downstream of the community. However, due to the existing impervious condition of San Ysidro, its location relative to the larger watersheds and the characteristics of the river, changes to runoff volumes or rates are not likely to result in a measurable impact to flooding or erosion (increase or decrease).

Changes to drainage patterns of the river resulting from future development projects in the floodplain could have the potential to increase flooding on or off-site. Therefore, any future specific development projects proposed within the floodplain must be studied to determine the impacts. A portion of San Ysidro is designated Zone AE and another portion is designated Zone X on the Flood Insurance Rate Map (FIRM) published by the Federal Emergency Management Agency (FEMA), and base flood elevations have been determined. A southerly portion of the SYHVSP area clips the 500-year FEMA floodplain. The City of San Diego's requirements for protection from flooding are that the lowest floor of any structure must be elevated at least 2 feet above the base flood elevation, and fully enclosed areas below the lowest floor that are subject to flooding shall comply with FEMA's requirements for flood proofing (City of San Diego Municipal Code Section 143.0146(c)). Pursuant to City of San Diego Municipal Code Section 143.0145, all future development projects must be studied to determine the effects to base flood elevations and ensure it will not result in flooding, erosion, or sedimentation impacts on or off-site.

The land use designations that intersect the floodplains are a combination of residential, commercial, retail, services, park, open space, and recreation. Floodplain regulations in the City of San Diego are in effect regardless of the San Ysidro Community Plan Update.

Water Quality Issues 1 and 2

Future specific development projects pursuant to the proposed community plan update have the potential to change pollutant discharges either from an increase in the volume of storm water runoff, or from addition of new sources of pollution. This is evaluated for the receiving water impacts.

As discussed above in relation to drainage, the volume of runoff from San Ysidro is not expected to increase as a result of future development projects. It could decrease. This is

because San Ysidro is currently highly impervious, and because new storm water regulations require implementation of LID practices that retain a portion of storm water on-site for infiltration, re-use, or evaporation (this is applicable both in the 2007 and 2013 MS4 Permit). Therefore increased runoff is not expected to be a factor in future pollutant loads.

Regardless of land use, sources of pollution can be expected to decrease with new development projects in San Ysidro. This is because new storm water regulations require implementation of permanent storm water best management practices (BMPs) to reduce storm water pollution. Existing development in San Ysidro was constructed before the storm water regulations were adopted and generally does not include practices such as the LID practices described above in Drainage Issue 1, which not only reduce pollution by reducing runoff volume but can also provide treatment by filtration and microbial action for runoff that will ultimately be discharged through underdrains; nor does the existing development typically include any other structural practices to prevent the transport of pollutants off-site such as trash traps or manufactured filtration devices. Under current storm water regulations in the City of San Diego, all projects requiring development approvals are subject to certain minimum storm water requirements, and Priority Development Projects as defined by the City of San Diego Storm Water Standards Manual are subject to specific numeric sizing standards for storm water practices. Types of storm water BMPs required for new development projects under current storm water regulations include site design, source control, and treatment control practices, many of which overlap LID practices. The storm water BMPs will reduce the amount of pollutants transported from San Ysidro to receiving waters.

As described in Section 3.0 of this report, the Regional Water Quality Control Board has initiated Total Maximum Daily Load (TMDL) studies for the specific pollutants that are currently causing impairment of the Tijuana River. TMDL studies are ultimately used to establish control actions needed to restore and protect bodies of water. Once the TMDLs are developed and adopted, control actions will be implemented through the Municipal

Storm Water Permit, and any applicable requirements for new development projects will be implemented through the City of San Diego's Storm Water Standards Manual.

Based on the "Water Quality Control Plan for the San Diego Basin (9)" (2012), the groundwater beneficial uses for the San Ysidro hydrologic unit include municipal and domestic supply (MUN), agricultural supply (AGR), and industrial service supply (IND). These beneficial uses do not apply west of Hollister Street and this area is excluded from the sources of drinking water policy. New development projects in San Ysidro has potential to improve groundwater quality through removal of potential sources of groundwater contamination, such as small chemical storage facilities and metal plating shops that have the potential for releases of hazardous material. Current storm water regulations that require infiltration of some storm water runoff where feasible include design requirements for protection of groundwater.

Average daily traffic is one factor in the amount of pollution generated from roadways. However, there are many other variables that may affect pollutant concentrations from roadways, including curbs, barriers, grass shoulders, landscaping, traffic characteristics such as speed and braking, vehicle characteristics such as age and maintenance, road maintenance practices, societal practices (i.e. – littering), and pavement composition and quality. The City of San Diego's requirements for storm water BMPs for streets will be implemented on any project, and the resulting improvements compared to the existing condition with no storm water BMPs can be expected to be greater.

Adherence to the requirements of the City of San Diego's Storm Water Standards Manual can be expected to improve water quality conditions, or at a minimum, to not exacerbate existing water quality impairments. Storm water requirements in the City of San Diego are effective regardless of the San Ysidro Community Plan Update.

ATTACHMENT A

San Ysidro Community Location Map

San Ysidro Community Location Map

Attachment A

W:\16657\GIS\SanYsidro_CommunityLocation_v10.mxd

Exhibit Date: February 23, 2016

REC JN: 16657

N

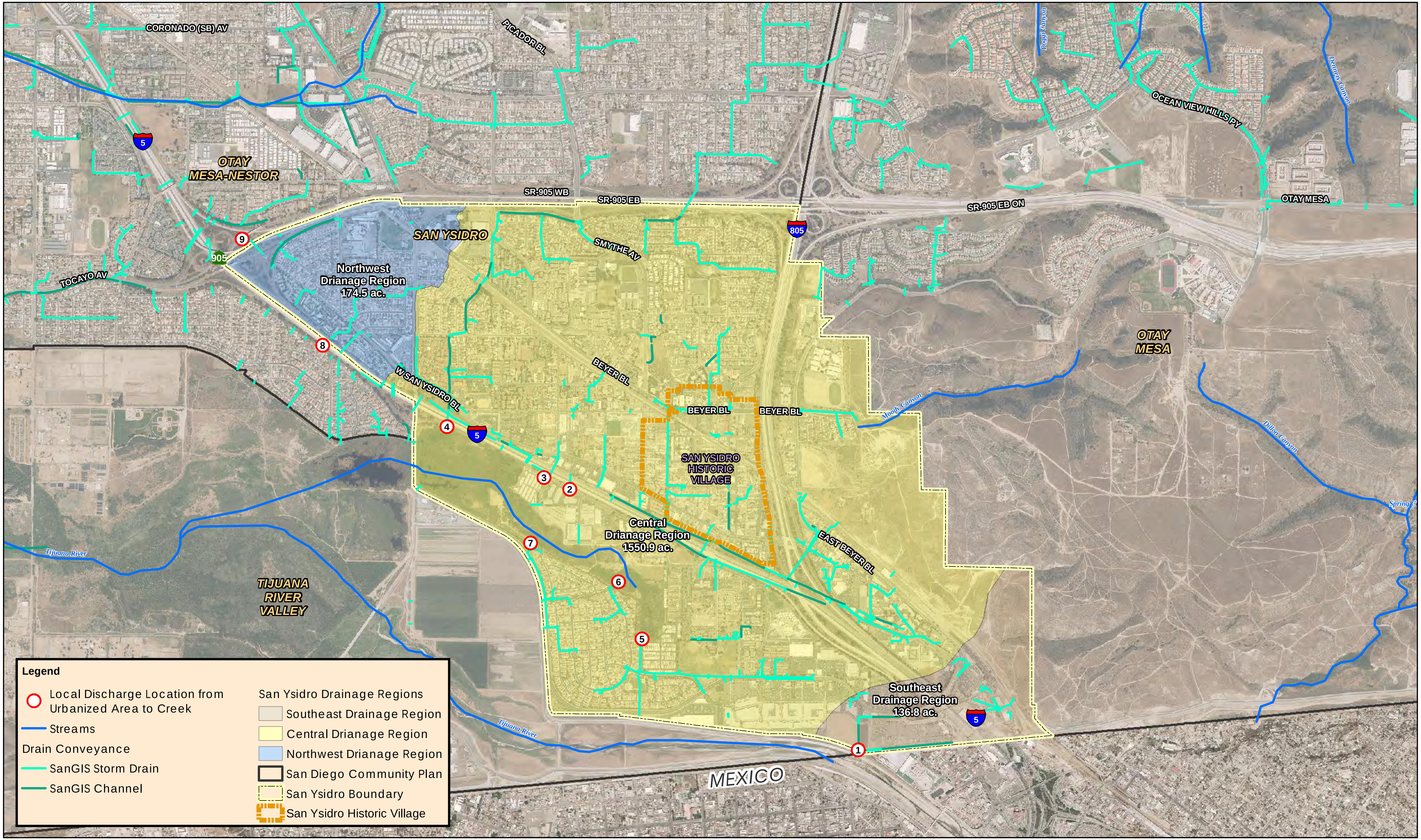
0 750 1,500 3,000 Feet

Data Sources:
SanGIS Community Plan SD: 08.2014
SanGIS Streams NHD: 10.2012
Eagle Aerial Image: 04.2013

RICK ENGINEERING COMPANY

ATTACHMENT B

Drainage Region Map
(including Existing Channels, Storm Drain and Local Discharge Locations)



San Ysidro Community Drainage Region Map - Preliminary

Attachment B

W:\16657\GIS\SanYsidro_DrainageRegion.mxd

Exhibit Date: July 27, 2016

REC JN: 16657

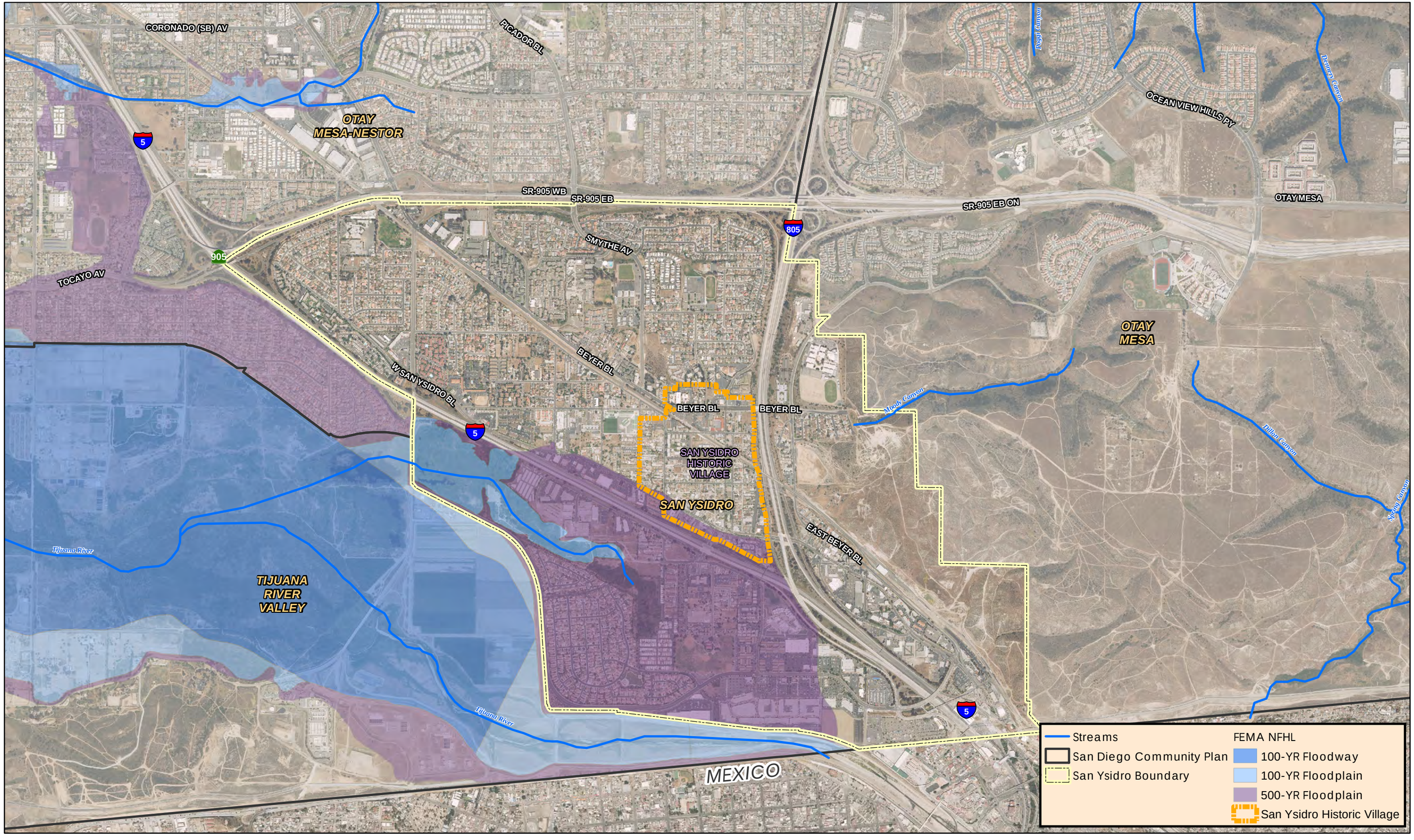
0 750 1,500 3,000 Feet

Data Sources:
SanGIS Drainage Region: 01.2012
SanGIS Storm Drain Conveyance: 04.2010
SanGIS Community Plan SD: 08.2014
Eagle Aerial Image: 04.2013

RICK ENGINEERING COMPANY

ATTACHMENT C

FEMA Floodplain Mapping
and
Annotated FIRMette



San Ysidro Community Floodplain Map - Preliminary

Attachment C

W:\16657\GIS\SanYsidro_FloodPlain_v10.mxd

Exhibit Date: February 23, 2016

REC JN: 16657

0 750 1,500 3,000 Feet

Data Sources:
FEMA NFHL: 03.28.2014
SanGIS Storm Drain Conveyance: 04.2010
SanGIS Community Plan SD: 08.2014
Eagle Aerial Image: 04.2013

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NOTES TO USERS

This map is for use in administering the National Flood Insurance Program. It does not necessarily identify all areas subject to flooding, particularly from local drainage sources of small size. The **community map repository** should be consulted for possible updated or additional flood hazard information.

To obtain more detailed information in areas where **Base Flood Elevations** (BFEs) and/or **floodways** have been determined, users are encouraged to consult the Flood Profiles and Floodway Data and/or Summary of Stillwater Elevations tables contained within the Flood Insurance Study (FIS) report that accompanies this FIRM. Users should be aware that BFEs shown on the FIRM represent rounded whole-foot elevations. These BFEs are intended for flood insurance rating purposes only and should not be used as the sole source of flood elevation information. Accordingly, flood elevation data presented in the FIS report should be utilized in conjunction with the FIRM for purposes of construction and/or floodplain management.

Coastal Base Flood Elevations (BFEs) shown on this map apply only landward of 0.0' North American Vertical Datum of 1988 (NAVD 88). Users of this FIRM should be aware that coastal flood elevations are also provided in the Summary of Stillwater Elevations table in the Flood Insurance Study report for this jurisdiction. Elevations shown in the Summary of Stillwater Elevations table should be used for construction and/or floodplain management purposes when they are higher than the elevations shown on this FIRM.

Boundaries of the **floodways** were computed at cross sections and interpolated between cross sections. The floodways were based on hydraulic considerations with regard to requirements of the National Flood Insurance Program. Floodway widths and other pertinent floodway data are provided in the Flood Insurance Study report for this jurisdiction.

Certain areas not in Special Flood Hazard Areas may be protected by **flood control structures**. Refer to Section 2.4 "Flood Protection Measures" of the Flood Insurance Study report for information on flood control structures for this jurisdiction.

The **projection** used in the preparation of this map was Universal Transverse Mercator (UTM) Zone 11. The **horizontal datum** was NAD83, GRS1980 spheroid. Differences in datum, spheroid, projection or UTM zones used in the production of FIRMs for adjacent jurisdictions may result in slight positional differences in map features across jurisdiction boundaries. These differences do not affect the accuracy of this FIRM.

Flood elevations on this map are referenced to the North American Vertical Datum of 1988. These flood elevations must be compared to structure and ground elevations referenced to the same **vertical datum**. For information regarding conversion between the National Geodetic Vertical Datum of 1929 and the North American Vertical Datum of 1988, visit the National Geodetic Survey website at http://www.ngs.noaa.gov/ or contact the National Geodetic Survey at the following address:

NGS Information Services
NOAA, N/NGS12
National Geodetic Survey
SSMC-3, #9202
1315 East-West Highway
Silver Spring, Maryland 20910-3282
(301) 713-3242

To obtain current elevation, description, and/or location information for **bench marks** shown on this map, please contact the Information Services Branch of the National Geodetic Survey at **(301) 713-3242** or visit its website at http://www.ngs.noaa.gov/.

Base map information shown on this FIRM was provided in digital format by the USDA National Agriculture Imagery Program (NAIP). This information was photogrammetrically compiled at a scale of 1:24,000 from aerial photography dated 2009.

This map reflects more detailed and up-to-date **stream channel configurations** than those shown on the previous FIRM for this jurisdiction. The floodplains and floodways that were transferred from the previous FIRM may have been adjusted to conform to these new stream channel configurations. As a result, the Flood Profiles and Floodway Data tables in the *Flood Insurance Study report* (which contains *authoritative hydraulic data*) may reflect stream channel distances that differ from what is shown on this map.

Corporate limits shown on this map are based on the best data available at the time of publication. Because changes due to annexations or de-annexations may have occurred after this map was published, map users should contact appropriate community officials to verify current corporate limit locations.

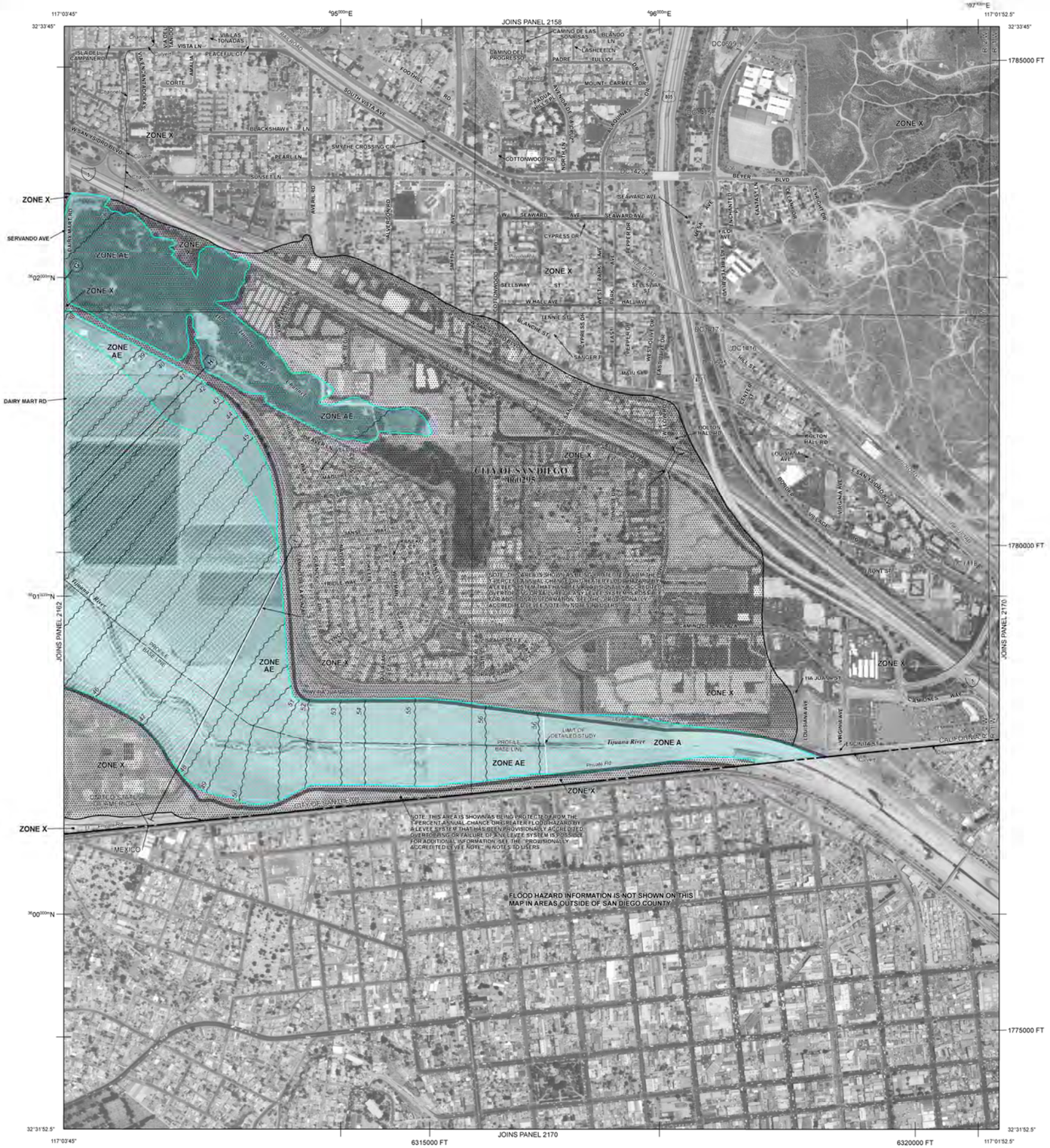
Please refer to the separately printed **Map Index** for an overview map of the county showing the layout of map panels; community map repository addresses; and a Listing of Communities table containing National Flood Insurance Program dates for each community as well as a listing of the panels on which each community is located.

Contact the **FEMA Map Service Center** at 1-877-FEMA MAP (1-877-336-2627) for information on available products associated with this FIRM. Available products may include previously issued Letters of Map Change, a Flood Insurance Study report, and/or digital versions of this map. The FEMA Map Service Center may also be reached by Fax at 1-800-358-9620 and its website at http://msc.fema.gov/.

If you have **questions about this map** or questions concerning the National Flood Insurance Program in general, please call **1-877-FEMA MAP** (1-877-336-2627) or visit the FEMA website at http://www.fema.gov/business/nfip/.

The **"profile base lines"** depicted on this map represent the hydraulic modeling baselines that match the flood profiles in the FIS report. As a result of improved topographic data, the "profile base line", in some cases, may deviate significantly from the channel centerline or appear outside the SFHA.

Provisionally Accredited Levee Notes to Users: Check with your local community to obtain more information, such as the estimated level of protection provided (which may exceed the 1-percent-annual-chance level) and Emergency Action Plan, on the levee system(s) shown as providing protection for areas on this panel. To maintain accreditation, the levee owner or community is required to submit the data and documentation necessary to comply with Section 65.10 of the NFIP regulations by July 23, 2009. If the community or owner does not provide the necessary data and documentation or if the data and documentation provided indicate the levee system does not comply with Section 65.10 requirements, FEMA will revise the flood hazard and risk information for this area to reflect de-accreditation of the levee system. To mitigate flood risk in residual risk areas, property owners and residents are encouraged to consider flood insurance and floodproofing or other protective measures. For more information on flood insurance, interested parties should visit the FEMA Website at http://www.fema.gov/business/nfip/index/.shtm.



LEGEND

SPECIAL FLOOD HAZARD AREAS SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD

The 1% annual chance flood (100-year flood), also known as the base flood, is the flood that has a 1% chance of being equaled or exceeded in any given year. The Special Flood Hazard Area is the area subject to flooding by the 1% annual chance flood. Areas of Special Flood Hazard include Zones A, AE, AH, AO, AR, A99, V, and VE. The Base Flood Elevation is the water-surface elevation of the 1% annual chance flood.

ZONE A No Base Flood Elevations determined.

ZONE AE Base Flood Elevations determined.

ZONE AH Flood depths of 1 to 3 feet (usually areas of ponding); Base Flood Elevations determined.

ZONE AO Flood depths of 1 to 3 feet (usually sheet flow on sloping terrain); average depths determined. For areas of alluvial fan flooding, velocities also determined.

ZONE AR Special Flood Hazard Area formerly protected from the 1% annual chance flood by a flood control system that was subsequently decertified. Zone AR indicates that the former flood control system is being restored to provide protection from the 1% annual chance or greater flood.

ZONE A99 Areas to be protected from 1% annual chance flood event by a Federal flood protection system under construction; no Base Flood Elevations determined.

ZONE V Coastal flood zone with velocity hazard (wave action); no Base Flood Elevations determined.

ZONE VE Coastal flood zone with velocity hazard (wave action); Base Flood Elevations determined.

FLOODWAY AREAS IN ZONE AE

The floodway is the channel of a stream plus any adjacent floodplain areas that must be kept free of encroachment so that the 1% annual chance flood can be carried without substantial increases in flood heights.

OTHER FLOOD AREAS

ZONE X Areas of 0.2% annual chance flood; areas of 1% annual chance flood with average depths of less than 1 foot or with drainage areas less than 1 square mile; and areas protected by levees from 1% annual chance flood.

OTHER AREAS

ZONE X Areas determined to be outside the 0.2% annual chance floodplain

ZONE D Areas in which flood hazards are undetermined, but possible.

COASTAL BARRIER RESOURCES SYSTEM (CBRS) AREAS

OTHERWISE PROTECTED AREAS (OPAs)

CBRS areas and OPAs are normally located within or adjacent to Special Flood Hazard Areas.

1% annual chance floodplain boundary

0.2% annual chance floodplain boundary

Floodway boundary

Zone D boundary

CBRS and OPA boundary

Boundary dividing Special Flood Hazard Area Zones and boundary dividing Special Flood Hazard Areas of different Base Flood Elevations, flood depths, or flood velocities.

513 Base Flood Elevation line and value; elevation in feet*

(EL 987) Base Flood Elevation value where uniform within zone; elevation in feet*

* Referenced to the North American Vertical Datum of 1988

A — A Cross section line

23 — 23 Transect line

97°07'30", 32°22'30" Geographic coordinates referenced to the North American Datum of 1983 (NAD 83), Western Hemisphere

4775000mE 1000-meter Universal Transverse Mercator grid ticks, zone 11

6000000 FT 5000-foot grid values: California State Plane coordinate system, Zone VI (FIPSZONE = 406), Lambert projection

DX5510 Bench mark (see explanation in Notes to Users section of this FIRM panel)

M1.5 River Mile

MAP REPOSITORIES
Refer to Map Repositories list on Map Index

EFFECTIVE DATE OF COUNTYWIDE
FLOOD INSURANCE RATE MAP
June 19, 1997

EFFECTIVE DATE(S) OF REVISION(S) TO THIS PANEL
May 16, 2012 – to update corporate limits, to add roads and road names, to incorporate previously issued Letters of Map Revision, and to update map elevations to North American Vertical Datum of 1988.

For community map revision history prior to countywide mapping, refer to the Community Map History table located in the Flood Insurance Study report for this jurisdiction.

To determine if flood insurance is available in this community, contact your insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

MAP SCALE 1" = 500'

250 0 250 500 750 1,000 FEET
150 0 150 300 METERS

NFIP NATIONAL FLOOD INSURANCE PROGRAM

PANEL 2166G

FIRM

FLOOD INSURANCE RATE MAP

SAN DIEGO COUNTY, CALIFORNIA AND INCORPORATED AREAS

PANEL 2166 OF 2375

(SEE MAP INDEX FOR FIRM PANEL LAYOUT)

CONTAINS:

COMMUNITY	NUMBER	PANEL	SUFFIX
SAN DIEGO, CITY OF	060295	2166	G

Notice to User: The **Map Number** shown below should be used when placing map orders; the **Community Number** shown above should be used on insurance applications for the subject community.

MAP NUMBER
06073C2166G

MAP REVISED
MAY 16, 2012

Federal Emergency Management Agency

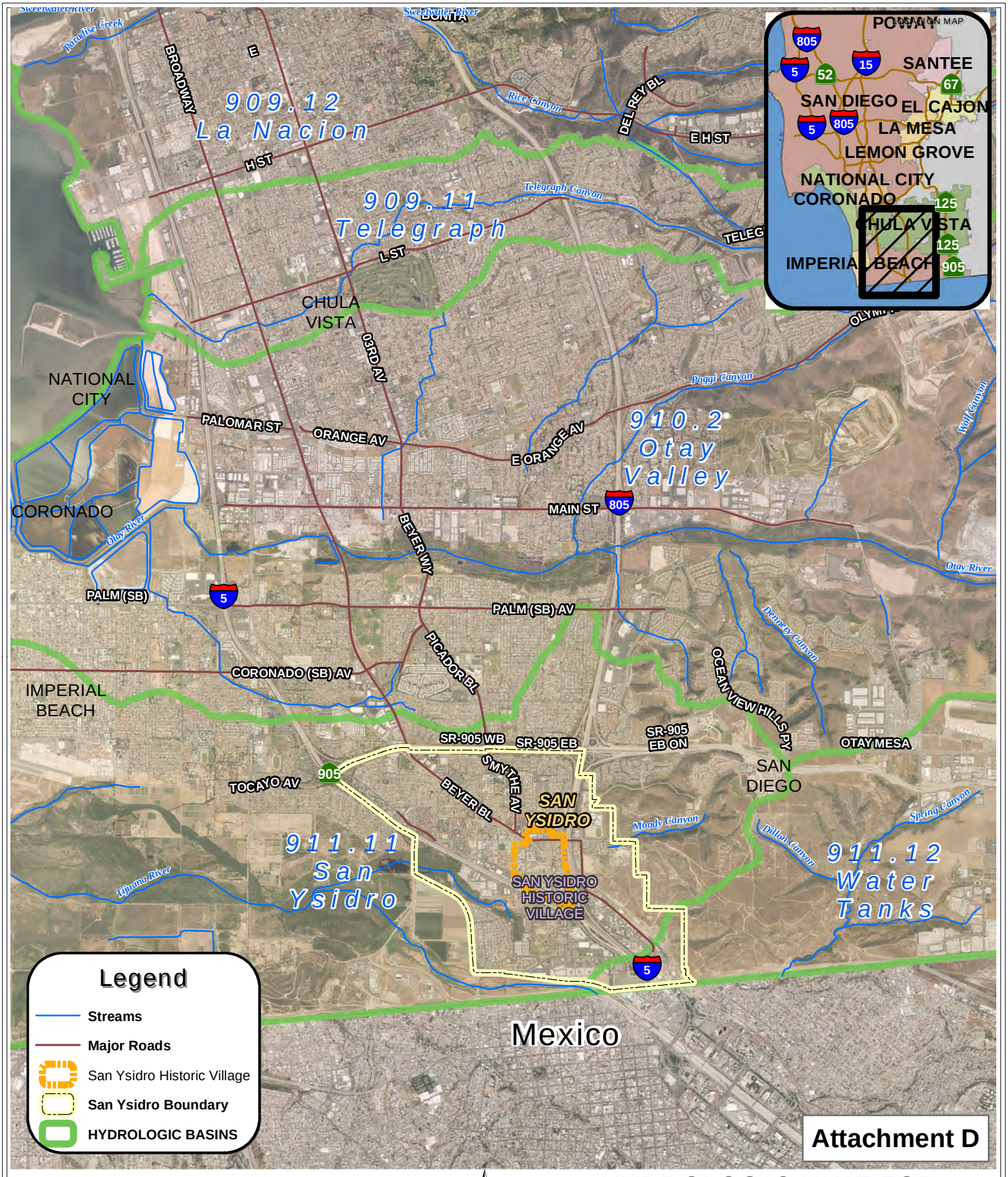
ATTACHMENT D

Hydrologic Unit Map

and

Excerpts from 2010 Clean Water Act Section 303(d) List of Water Quality Limited Segments

[303(d) List]



Legend

- Streams
- Major Roads
- San Ysidro Historic Village
- San Ysidro Boundary
- HYDROLOGIC BASINS

Attachment D

RICK ENGINEERING COMPANY

PREPARED BY GIS SERVICES DIVISION

1 inch = 5,000 feet

0 2,500 5,000 10,000 Feet

EXHIBIT DATE: February 23, 2016 REC JN: 16657

W:\16657\GIS\SanYsidro_Hydrologic_Unit_v10.mxd

HYDROLOGIC UNIT FOR SAN YSIDRO COMMUNITY

THIS PROJECT LOCATED WITHIN THE CITY OF SAN DIEGO

2010 California 303(d) List of Water Quality Limited Segments*

Water quality limited segments requiring a TMDL(5A), being addressed by TMDL(5B), and/or being addressed by an action other than TMDL(5C).

REGION	REGION NAME	WATER BODY NAME	WBID	WATER BODY TYPE	WBTYPE CODE	INTEGRATED REPORT CATEGORY	USGS CATALOGING UNIT*	CALWATER WATERSHED	ESTIMATED SIZE AFFECTED	UNIT	POLLUTANT	POLLUTANT CATEGORY	FINAL LISTING DECISION	TMDL REQUIREMENT STATUS**	EXPECTED TMDL COMPLETION DATE***	EXPECTED ATTAINMENT DATE***	USEPA TMDL APPROVED DATE***	COMMENTS INCLUDED ON 303(d) LIST
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Aliso HSA, at Aliso Beach - middle	CAC901130002009052521295 8	Coastal & Bay Shoreline	C	5	18070301	90113000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Aliso HSA, at Aliso Beach - middle	CAC901130002009052521295 8	Coastal & Bay Shoreline	C	5	18070301	90113000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Aliso HSA, at Aliso Creek mouth	CAC901130002009052521351 3	Coastal & Bay Shoreline	C	5	18070301	90113000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Aliso HSA, at Aliso Creek mouth	CAC901130002009052521351 3	Coastal & Bay Shoreline	C	5	18070301	90113000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Aliso HSA, at Aliso Creek mouth	CAC901130002009052521351 3	Coastal & Bay Shoreline	C	5	18070301	90113000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2012			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Batiquitos HSA, at Moonlight State Beach (Cottonwood Creek outlet)	CAC904510002009102614290 8	Coastal & Bay Shoreline	C	5	1807303	90451000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Coronado HA, at Silver Strand (north end, Oceanside)	CAC910100002009110411482 0	Coastal & Bay Shoreline	C	5	18070304	91010000	0.03	Miles	Enterococcus	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Dana Point HSA, at Aliso Beach at West Street	CAC901140002009072522025 9	Coastal & Bay Shoreline	C	5	18070301	90114000	0.03	Miles	Indicator Bacteria	Pathogens	List on 303(d) list (TMDL required list)	5A	2005			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Dana Point HSA, at Dana Point Harbor at Baby Beach	CAC901140002009111610332 7	Coastal & Bay Shoreline	C	5	18070301	90114000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2012			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Dana Point HSA, at Dana Point Harbor at Baby Beach	CAC901140002009111610332 7	Coastal & Bay Shoreline	C	5	18070301	90114000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2012			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Dana Point HSA, at Salt Creek outlet at Monarch Beach	CAC901140002009050512555 1	Coastal & Bay Shoreline	C	5	18070301	90114000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Imperial Beach Pier	CAC910100002005091817274 5	Coastal & Bay Shoreline	C	5	18070305	91010000	0.42	Miles	Fecal Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Imperial Beach Pier	CAC910100002005091817274 5	Coastal & Bay Shoreline	C	5	18070305	91010000	0.42	Miles	PCBs (Polychlorinated biphenyls)	Other Organics	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Imperial Beach Pier	CAC910100002005091817274 5	Coastal & Bay Shoreline	C	5	18070305	91010000	0.42	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Laguna Beach HSA, at Main Beach	CAC901120002009050510455 2	Coastal & Bay Shoreline	C	5	18070301	90112000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Loma Alta HSA, at Loma Alta Creek mouth	CAC904100002009110417114 0	Coastal & Bay Shoreline	C	5	18070303	90410000	0.03	Miles	Indicator Bacteria	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at North Beach Creek	CAC901200002009050515461 3	Coastal & Bay Shoreline	C	5	18070301	90120000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at North Beach Creek	CAC901200002009050515461 3	Coastal & Bay Shoreline	C	5	18070301	90120000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at North Beach Creek	CAC901200002009050515461 3	Coastal & Bay Shoreline	C	5	18070301	90120000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at North Doheny State Park Campground	CAC901300002009050515582 4	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Enterococcus	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at North Doheny State Park Campground	CAC901300002009050515582 4	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at San Juan Creek	CAC901200002009050515523 1	Coastal & Bay Shoreline	C	5	18070301	90120000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at San Juan Creek	CAC901200002009050515523 1	Coastal & Bay Shoreline	C	5	18070301	90120000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at San Juan Creek	CAC901200002009050515523 1	Coastal & Bay Shoreline	C	5	18070301	90120000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Lower San Juan HSA, at South Doheny State Park Campground	CAC901300002009050516203 5	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Enterococcus	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Miramar Reservoir HA, at Los Penasquitos River mouth	CAX906100002002112715530 0	Coastal & Bay Shoreline	C	5	18070304	90610000	0.39	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Otay Valley HA, at Carnation Ave and Camp Surf Jetty	CAC910100002009110413320 8	Coastal & Bay Shoreline	C	5	18070305	91010000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Point Loma HA, at Bermuda Ave	CAC908100002009110410434 3	Coastal & Bay Shoreline	C	5	18070304	90810000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Clemente HA, at Poche Beach	CAC901300002009041822091 3	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Clemente HA, at Poche Beach	CAC901300002009041822091 3	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			

2010 California 303(d) List of Water Quality Limited Segments*

Water quality limited segments requiring a TMDL(5A), being addressed by TMDL(5B), and/or being addressed by an action other than TMDL(5C).

REGION	REGION NAME	WATER BODY NAME	WBID	WATER BODY TYPE	WBTYPE CODE	INTEGRATED REPORT CATEGORY	USGS CATALOGING UNIT*	CALWATER WATERSHED	ESTIMATED SIZE AFFECTED	UNIT	POLLUTANT	POLLUTANT CATEGORY	FINAL LISTING DECISION	TMDL REQUIREMENT STATUS**	EXPECTED TMDL COMPLETION DATE***	EXPECTED ATTAINMENT DATE***	USEPA TMDL APPROVED DATE***	COMMENTS INCLUDED ON 303(d) LIST
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Clemente HA, at San Clemente City Beach at Pier	CAC901300002009041900 1811	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Clemente HA, at San Clemente City Beach, North Beach	CAC901300002009041823 2344	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Clemente HA, at South Capistrano Beach at Beach Road	CAC901300002009050516 0142	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Clemente HA, at South Capistrano County Beach	CAC901300002009052612 0147	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2012			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Clemente HA, at South Capistrano County Beach	CAC901300002009052612 0147	Coastal & Bay Shoreline	C	5	18070301	90130000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Diego HU, at the San Diego River outlet, at Dog Beach	CAC907110002009110413 1050	Coastal & Bay Shoreline	C	5	18070304	90711000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Diego HU, at the San Diego River outlet, at Dog Beach	CAC907110002009110413 1050	Coastal & Bay Shoreline	C	5	18070304	90711000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2010			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Dieguito HU, at San Dieguito Lagoon Mouth at San Dieguito River Beach	CAC905110002009102621 5544	Coastal & Bay Shoreline	C	5	18070304	90511000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2010			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Elijo HSA, at Cardiff State Beach at San Elijo Lagoon	CAX904610001999111616 4230	Coastal & Bay Shoreline	C	5	18070303	90461000	0.44	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2008			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Luis Rey HU, at San Luis Rey River mouth	CAC903110002009062611 5722	Coastal & Bay Shoreline	C	5	18070302	90311000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Luis Rey HU, at San Luis Rey River mouth	CAC903110002009062611 5722	Coastal & Bay Shoreline	C	5	18070302	90311000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, San Mateo Canyon HA, at San Mateo Creek outlet	CAC901400002009021816 5222	Coastal & Bay Shoreline	C	5	18070301	90140000	0.31	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Avenida de la Playa at La Jolla Shores Beach	CAC906300002009042216 0501	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Childrens Pool	CAC906300002009062611 3813	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Childrens Pool	CAC906300002009062611 3813	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Childrens Pool	CAC906300002009062611 3813	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at La Jolla Cove	CAC906300002009042216 2520	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Pacific Beach Point , Pacific Beach	CAC906300002009042217 1057	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Enterococcus	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Pacific Beach Point , Pacific Beach	CAC906300002009042217 1057	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Fecal Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Pacific Beach Point , Pacific Beach	CAC906300002009042217 1057	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Ravina	CAC906300002009042216 4430	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Scripps HA, at Vallecitos Court at La Jolla Shores Beach	CAC906300002009052016 5643	Coastal & Bay Shoreline	C	5	18070304	90630000	0.03	Miles	Total Coliform	Pathogens	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at 3/4 mile North of Tijuana River	CAC911110002009050513 4454	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at 3/4 mile North of Tijuana River	CAC911110002009050513 4454	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at 3/4 mile North of Tijuana River	CAC911110002009050513 4454	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at Monument Road	CAC911110002009050513 5322	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at Monument Road	CAC911110002009050513 5322	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at Tijuana River mouth	CAC911110002009050513 4951	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			

2010 California 303(d) List of Water Quality Limited Segments*

Water quality limited segments requiring a TMDL(5A), being addressed by TMDL(5B), and/or being addressed by an action other than TMDL(5C).

REGION	REGION NAME	WATER BODY NAME	WBID	WATER BODY TYPE	WBTYPE CODE	INTEGRATED REPORT CATEGORY	USGS CATALOGING UNIT*	CALWATER WATERSHED	ESTIMATED SIZE AFFECTED	UNIT	POLLUTANT	POLLUTANT CATEGORY	FINAL LISTING DECISION	TMDL REQUIREMENT STATUS**	EXPECTED TMDL COMPLETION DATE***	EXPECTED ATTAINMENT DATE***	USEPA TMDL APPROVED DATE***	COMMENTS INCLUDED ON 303(d) LIST
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at Tijuana River mouth	CAC911110002009050134951	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at Tijuana River mouth	CAC911110002009050134951	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at end of Seacoast Drive	CAC911110002009050131259	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at end of Seacoast Drive	CAC911110002009050131259	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at end of Seacoast Drive	CAC911110002009050131259	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at the US Border	CAC911110002009050135528	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Enterococcus	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at the US Border	CAC911110002009050135528	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Fecal Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Pacific Ocean Shoreline, Tijuana HU, at the US Border	CAC911110002009050135528	Coastal & Bay Shoreline	C	5	18070305	91111000	0.03	Miles	Total Coliform	Pathogens	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Eutrophic	Nutrients	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Indicator Bacteria	Pathogens	List on 303(d) list (TMDL required list)	5A	2010			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Low Dissolved Oxygen	Nutrients	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Pesticides	Pesticides	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Phosphorus	Nutrients	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Sedimentation/Siltation	Sediment	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Selenium	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Solids	Miscellaneous	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Surfactants (MBAS)	Other Organics	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Synthetic Organics	Other Organics	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Total Nitrogen as N	Nutrients	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Toxicity	Toxicity	List on 303(d) list (TMDL required list)	5A	2021			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Trace Elements	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River	CAR911110001999020813394O	River & Stream	R	5	18070305	91111000	6.0	Miles	Trash	Trash	List on 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Eutrophic	Nutrients	List on 303(d) list (TMDL required list)	5A	2019			Estimated size of impairment is 1 acre.
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Indicator Bacteria	Pathogens	List on 303(d) list (TMDL required list)	5A	2010			Estimated size of impairment is 150 acres.
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Lead	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2019			Estimated size of impairment is 1 acre.
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Low Dissolved Oxygen	Nutrients	Do Not Delist from 303(d) list (TMDL required list)	5A	2019			
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Nickel	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2019			Estimated size of impairment is 1 acre.
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Pesticides	Pesticides	List on 303(d) list (TMDL required list)	5A	2019			Estimated size of impairment is 1 acre.
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Thallium	Metals/Metalloids	List on 303(d) list (TMDL required list)	5A	2019			Estimated size of impairment is 1 acre.
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Trash	Trash	List on 303(d) list (TMDL required list)	5A	2019			Estimated size of impairment is 1 acre.
9	Regional Board 9 - San Diego Region	Tijuana River Estuary	CAE911110001999020814303 2O	Estuary	E	5	18070305	91111000	1319	Acres	Turbidity	Sediment	List on 303(d) list (TMDL required list)	5A	2019			

ATTACHMENT E

Excerpts from Land Development Code (Sections 143.0145 and 143.0146)

§143.0145 Development Regulations for Special Flood Hazard Areas

(a) *Special Flood Hazard Areas* within the City of San Diego are established in accordance with the report entitled "*Flood Insurance Study,* San Diego County, California," dated June 16, 1999 and the accompanying *Flood Insurance Rate Maps (FIRM),* published by the Federal Emergency Management Agency (FEMA), on file in the office of the City Clerk as Document Nos. 18910-1 and 18910-2, including any supplements, amendments, and revisions which are properly promulgated by FEMA or the Federal Insurance Administrator.

(b) For the purpose of Sections 143.0145 and 143.0146, the City Engineer is the designated Floodplain Administrator and shall administer, implement, and enforce these regulations.

(c) The degree of *flood* protection required by this section is considered reasonable for regulatory purposes and is based on scientific and engineering considerations. Larger *floods* can and will occur on rare occasions. It is possible that increased *flood* heights may result from man-made or natural causes. This section does not imply that land outside a *Special Flood Hazard Area* or uses permitted within such areas will be free from *flooding* or *flood* damages. This section shall not create liability on the part of the City, any officer or employee thereof, or the FEMA, for any *flood* damages that result from reliance on this chapter or any administrative decision lawfully made there under.

(d) The following development regulations and all other applicable requirements and regulations of FEMA apply to all *development* proposing to encroach into a *Special Flood Hazard Area*, including both the *floodway* and *flood fringe* areas or that does not qualify for an exemption pursuant to Section 143.0110(c):

(e) *Floodways*

(1) Within the *floodway* portion of a *premises*, development regulations are as set forth for the OF zone, pursuant to Section 131.0231.

(2) *Structures* associated with any allowed use shall comply with the following requirements:

(A) *Structures* shall not be attached to a foundation, in order to readily move them in case of *flood*; and

(B) *Structures* shall be removed upon imminence of *flooding*, as predicted by the National Weather Service or local public weather broadcast. If a *structure* is not removed and *flooding* occurs, the retrieval or salvage of the *structure* and repair of any damage caused by the *structure* shall be the responsibility of the owner.

(3) *Channelization* or other substantial alteration of rivers or streams shall be limited to that necessary for the following:

(A) Essential public service projects, where no other feasible construction method or alternative project location exists; and

(B) *Flood* control projects, where no other feasible method for protecting existing public or private *development* exists and where such protection is necessary for public safety.

(C) Projects where the primary function is the improvement of fish and wildlife habitat.

(4) *Development* in *floodways* shall be offset by improvements or modifications to enable the passage of a *base flood*, in accordance with the FEMA standards and regulations provided in Section 143.0146.

(5) *Development* that involves *channelization* or other substantial alteration of rivers or streams is subject to the following requirements.

(A) All requirements and relevant recommendations of hydrological studies for the watershed of the affected stream, as approved by the City Engineer, shall be incorporated into the project design and mitigation measures. These requirements include erosional characteristics, flow velocities, volume, sediment transport, and maintenance of hydrology.

(B) The channel shall be designed to ensure that the following occur:

(i) Stream scour is minimized;

(ii) Erosion protection is provided;

(iii) Water flow velocities are maintained as specified by the City Engineer;

(iv) There are neither significant increases nor contributions to downstream bank erosion and sedimentation of *sensitive biological resources*; acceptable techniques to control stream sediment include planting riparian vegetation in and near the stream and detention or retention basins;

(v) Wildlife habitat and corridors are maintained;

(vi) Resource management criteria are implemented consistent with applicable *land use plans*; and

(vii) Groundwater recharge capability is maintained or improved.

(C) Channels that accommodate a *base flood* shall do so without increasing the water surface elevation more than one foot at any point from the level of a nonconfined *base flood* in the natural undeveloped floodplain. Channels may accommodate less than a *base flood* (low-flow channels), but shall be designed and constructed in accordance with FEMA regulations.

(D) All artificial channels shall consist of natural bottoms and sides and shall be designed and sized to accommodate existing and proposed riparian vegetation and other natural or proposed constraints. Where maintenance is proposed or required to keep vegetation at existing levels compatible with the design capacity of the channel, a responsible party shall be identified and a maintenance and monitoring process shall be established to the satisfaction of the City Engineer.

(6) *Development* shall not significantly adversely affect existing *sensitive biological resources* on-site or off-site.

(7) Within the Coastal Overlay Zone, no *structure* or portion thereof shall be erected, constructed, converted, established, altered or enlarged, or no landform alteration *grading*, placement or removal of vegetation, except that related to a historic and ongoing agricultural operation, or land division shall be permitted, provided:

(A) Parking lots, new roadways and roadway expansions shall be allowed only where indicated on an adopted *Local Coastal Program land use plan.*

(B) *Floodway* encroachments for utility and transportation crossings shall be offset by improvements or modifications to enable the passage of the *base flood*, in accordance with the FEMA standards and regulations provided in Section 143.0146.

(f) *Flood Fringe*. The applicable development regulations are those in the underlying zone, subject to the following supplemental regulations:

(1) Within the *flood fringe* of a *Special Flood Hazard Area*, permanent *structures* and *fill* for permanent *structures*, roads, and other *development* are allowed only if the following conditions are met:

(A) The *development* or *fill* will not significantly adversely affect existing *sensitive biological resources* on-site or off-site;

(B) The *development* is capable of withstanding *flooding* and does not require or cause the construction of off-site *flood* protective works including artificial *flood* channels, revetments, and levees nor will it cause adverse impacts related to *flooding* of properties located upstream or downstream, nor will it increase or expand a *(FIRM)* Zone A;

(C) *Grading* and *filling* are limited to the minimum amount necessary to accommodate the proposed *development*, harm to the environmental values of the floodplain is minimized including peak flow storage capacity, and *wetlands* hydrology is maintained;

(D) The *development* neither significantly increases nor contributes to downstream bank erosion and sedimentation nor causes an increase in *flood* flow velocities or volume; and

(E) There will be no significant adverse water quality impacts to downstream wetlands, lagoons or other *sensitive biological resources*, and the *development* is in compliance with the requirements and regulations of the National Pollution Discharge Elimination System, as implemented by the City of San Diego.

(F) The design of the *development* incorporates the findings and recommendations of both a site specific and coastal watershed hydrologic study.

(2) All *development* that involves *fill*, *channelization*, or other alteration of a *Special Flood Hazard Area* is subject to the requirements for *channelization* in Section 143.0145(e)(5) and with FEMA regulations.

(Amended 4-22-2002 by O-19051 N.S.; effective 10-8-2002.)
(Amended 11-13-08 by O-19805 N.S; effective 12-13-2008.)

§143.0146 Supplemental Regulations for Special Flood Hazard Areas

All proposed *development* within a *Special Flood Hazard Area* is subject to the following requirements and all other applicable requirements and regulations of FEMA.

(a) *Development* and Permit Review

(1) Where *base flood elevation* data has not been provided by the *Flood Insurance Study*, the City Engineer shall obtain, review, and utilize *base flood elevation* and *floodway* data available from federal or state sources, or require submittal of such data from the *applicant*. The City Engineer shall make interpretations, where needed, as to the location of the boundaries of the areas of the *Special Flood Hazard Area*, based on the best available engineering or scientific information.

(2) Proposed *development* in a *Special Flood Hazard Area* shall not adversely affect the *flood* carrying capacity of areas where *base flood elevations* have been determined but the *floodway* has not been designated. "Adversely affect" as used in this section means that the cumulative effect of the proposed *development*, when combined with all other existing and anticipated *development*, will not increase the water surface elevation of the *base flood* more than one foot at any point.

(3) In all cases where a watercourse is to be altered the City Engineer shall do the following:

(A) Notify affected, adjacent communities and the California Department of Water Resources of any proposed alteration or relocation of a watercourse and submit evidence of the notice to the Federal Insurance Administration;

(B) Require that the *flood* carrying capacity of the altered or relocated portion of the watercourse is maintained; and

(C) Secure and maintain for public inspection and availability the *certifications*, appeals, and variances required by these regulations.

(4) The *applicant* shall grant a flowage easement to the City for that portion of the property within a *floodway*.

(5) Appropriate agreements shall be secured between the *applicant* and the City to assure participation by the *applicant* or any successor in interest in financing of future *flood* control works.

(6) *Development* in a *Special Flood Hazard Area* shall not increase or expand a *FIRM* Zone A.

(7) In In all *floodways*, any *encroachment*, including *fill*, new construction, significant modifications, and other *development* is prohibited unless *certification* by a registered professional engineer is provided demonstrating that *encroachments* will not result in any increase in *flood* levels during the occurrence of the *base flood* discharge except as allowed under Code of Federal Regulations Title 44, Chapter 1, Part 60.3(c)(13).

(b) Standards for *Subdivisions*

(1) All preliminary *subdivision* proposals shall identify the *Special Flood Hazard Area* and the elevation of the *base flood*.

(2) All final *subdivision maps* shall provide the elevation of proposed *structures* and pads. If the site is *filled* above the *base flood elevation*, the *lowest floor*, including *basement*, shall be certified to be 2 feet above the *base flood elevation* by a registered professional engineer or surveyor, and the *certification* shall be provided to the City Engineer.

(3) All *subdivisions* shall be designed to minimize *flood* damage.

(4) All *subdivisions* shall have public utilities and facilities such as sewer, gas, electrical, and water systems located and constructed to minimize *flood* damage.

(5) All *subdivisions* shall provide adequate drainage to reduce exposure to *flood* hazards.

(6) The final map shall bear the notation "Subject to Inundation" for those portions of the property with a *grade* lower than 2 feet above the *base flood elevation*.

(c) Standards of Construction

In all *Special Flood Hazard Areas*, the following standards apply for all *development*.

(1) All permitted, permanent *structures* and other significant improvements shall be anchored to prevent flotation, collapse, or lateral movement resulting from hydrodynamic and hydrostatic loads, including the effects of buoyancy.

(2) All permitted permanent *structures* and other significant improvements shall be constructed with materials and utility equipment resistant to *flood* damage.

(3) Construction methods and practices that minimize *flood* damage shall be used.

(4) All electrical, heating, ventilation, plumbing, and air conditioning equipment and other service facilities shall be designed and located to prevent water from entering or accumulating within the equipment components during conditions of *flooding*.

(5) *Breakaway walls* shall be certified by a registered engineer or architect to meet all applicable FEMA requirements. The *certification* shall be provided to the City Engineer before final inspection approval.

(6) New construction or *substantial improvement* of any *structure* shall have the *lowest floor*, including *basement*, elevated at least 2 feet above the *base flood elevation*. Upon completion of the *development*, the elevation of the *lowest floor*, including *basement*, shall be certified by a registered professional engineer or surveyor to be properly elevated. The *certification* shall be provided to the City Engineer before final inspection approval. The City Engineer reserves the right to require a preliminary *certification* before foundation inspection approval.

(7) New construction or *substantial improvement* of any *structure* in *FIRM* Zone AH or AO shall have the *lowest floor*, including *basement*, elevated above the highest adjacent *grade* at least 2 feet higher than the depth number specified on the *FIRM*, or at least 4 feet if no depth number is specified. Upon the completion of the *structure* the elevation of the *lowest floor*, including *basement*, shall be certified by a registered professional engineer or surveyor, to be properly elevated. The *certification* shall be provided to the City Engineer before final inspection approval. The City Engineer may require a preliminary *certification* before foundation inspection approval.

(8) Permitted nonresidential construction shall either be elevated as required by Section 143.0146(c)(6) or (7) or, together with attendant utility and sanitary facilities, meet the flood proofing requirements of FEMA. *Certification* by a registered professional engineer or architect that such requirements are met shall be provided to the City Engineer before final inspection approval. The City Engineer may require a preliminary *certification* before foundation inspection approval.

(9) Fully enclosed areas below the *lowest floor* that are subject to *flooding* shall be certified by a registered professional engineer or architect that they comply with the flood proofing requirements of FEMA. The *certification* shall be provided to the City Engineer before final inspection approval.

(d) Standards for *Manufactured Homes*

All new and replacement *manufactured homes* and additions to *manufactured homes* are subject to the following regulations.

(1) The *lowest floor* shall be elevated at least 2 feet above the *base flood elevation*.

(2) *Manufactured homes* shall be securely anchored to a permanent foundation system to resist flotation, collapse, or lateral movement.

(3) A registered engineer or architect must certify that the conditions of this subsection have been met. The *certification* shall be provided to the City Engineer before final inspection approval.

(e) Standards for Utilities

Certification shall be provided to the City Engineer before final inspection approval that the following requirements have been met.

(1) All new and replacement water supply and sanitary sewage systems shall be designed to minimize or eliminate infiltration of *flood* waters into the system and discharge from systems into *flood* waters.

(2) On-site waste disposal systems shall be located and designed to avoid impairment to them or contamination from them during *flooding*.

(f) The City Engineer shall notify the San Diego District Offices of the Coastal Commission of any pending changes to the adopted Flood Insurance Rate Maps affecting property within the Coastal Overlay Zone when the City Engineer receives notification of such potential changes. The City Engineer shall notify the Commission staff when *costal development* within the City of San Diego's Coastal

Development Permit jurisdiction would require processing a change to the FIRM maps. The City Engineer shall assure the Commission's District Office has the most current effective Flood Insurance Rate Maps approved by FEMA by forwarding any revised maps affecting the Coastal Overlay Zone within thirty working days of City Engineer's receipt.

(Amended 4-22-2002 by O-19051 N.S.; effective 10-8-2002.)
(Amended 8-4-2011 by O-20081 N.S.; effective 10-6-2011.)

§143.0150 Deviations from Environmentally Sensitive Lands Regulations

Plans submitted in accordance with this section shall, to the maximum extent feasible, comply with the regulations of this division. If a proposed *development* does not comply with all applicable development regulations of this division and a deviation is requested as indicated in Table 143-01A, the Planning Commission may approve, conditionally approve, or deny the proposed Site Development Permit in accordance with Process Four, subject to the following:

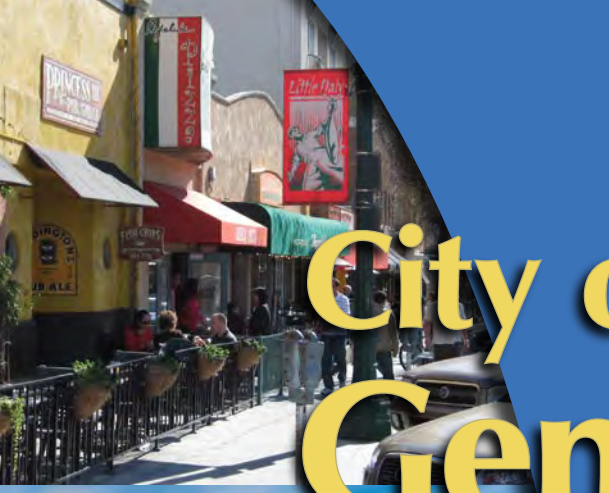
(a) Deviations from the regulations of this division may be granted only if the decision maker makes the *findings* in Section 126.0504(c).

(b) Deviations from the Supplemental Regulations for Special Flood Hazard Areas in Section 143.0146 may be granted only if the decision maker makes the *findings* in Section 126.0504(d).

(c) Within the Coastal Overlay Zone, deviations from the Environmentally Sensitive Lands Regulations may be granted only if the decision maker makes the *findings* in Section 126.0708.

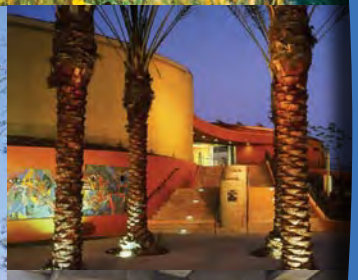
ATTACHMENT F

Excerpts from City of San Diego General Plan



City of San Diego General Plan

2008



CITY OF VILLAGES

Mayor Jerry Sanders

City Planning & Community Investment

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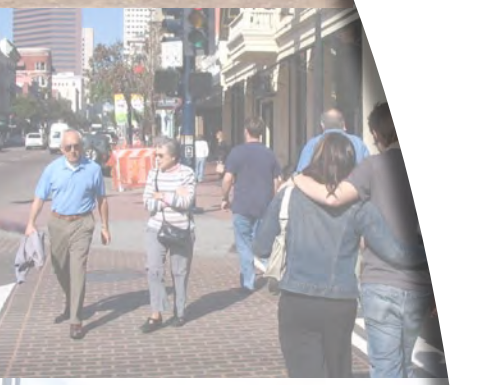



City of San Diego General Plan

CITY OF VILLAGES

Adopted by the:
Council of the City of San Diego
March 10, 2008

Resolution Number: R-303473

G. Storm Water Infrastructure

Goals

- Protection of beneficial water resources through pollution prevention and interception efforts.
- A storm water conveyance system that effectively reduces pollutants in urban runoff and storm water to the maximum extent practicable.

Discussion

City of San Diego storm drain

The City's storm water pollution prevention efforts and conveyance system strive to protect the quality of our recreational waters and potable water resources as mandated by the federal Clean Water Act of 1972 and the San Diego Regional Water Quality Control Board. The City also maintains compliance with the Water Quality Control Plan for the San Diego Region 9 also referred to as the Basin Plan, and with storm water permits. These functions require a multi-faceted approach that couples infrastructure improvements and maintenance, water quality monitoring, source identification of pollutants, land use planning policies and regulations, and pollution prevention activities such as education, code enforcement, outreach, public advocacy, and training. Additional discussion on Urban Runoff Management, Section E, is included in the Conservation Element.

The City has more than 39,000 storm drain structures and over 900 miles of storm drain pipes and channels serving approximately 237 square miles of urbanized development. Many storm water infrastructure projects do not have the opportunity to affect site design or implement other means to keep pollutants from entering storm drain flows. Therefore, prevention through education, outreach, code enforcement, and other efforts continues to be the most effective method of protecting water resources. Secondly, capital improvement investments in storm water structures (curbs, gutters, inlets, catch basins, pipes, and others) determined through Best Management Practices (BMP) are critical in order to reduce pollutant loading to acceptable levels. Public projects should be evaluated for their impact on the storm drain conveyance system and incorporate storm water quality and conveyance structures during the design process. Similarly, private development will mitigate the impacts of its development on the storm water conveyance system while overall system monitoring including the identification of needs is also performed by the City.

In addition to capital investments in storm water structures, operations and maintenance are equally critical to ensure governmental compliance and clean water resources. Furthermore, state regulations require that the City keep track of storm water structure locations and maintenance via inspections, and in some cases, collection and/or reporting of storm water quality monitoring data. The storm drain fee and other sources of funds are instrumental in ensuring compliance with legal mandates and maintaining storm water prevention and conveyance functions.

Policies

PF-G.1. Ensure that all storm water conveyance systems, structures, and maintenance practices are consistent with federal Clean Water Act and California Regional Water Quality Control Board NPDES Permit standards.

PF-G.2. Install infrastructure that includes components to capture, minimize, and/or prevent pollutants in urban runoff from reaching receiving waters and potable water supplies.

PF-G.3. Meet and preferably exceed regulatory mandates to protect water quality in a cost-effective manner monitored through performance measures.

PF-G.4. Develop and employ a strategic plan for the City's watersheds to foster a comprehensive approach to storm water infrastructure improvements.

PF-G.5. Identify and implement BMPs for projects that repair, replace, extend or otherwise affect the storm water conveyance system. These projects should also include design considerations for maintenance, inspection, and, as applicable, water quality monitoring.

PF-G.6. Identify partnerships and collaborative efforts to sponsor and coordinate pollution prevention BMPs that benefit storm water infrastructure maintenance and improvements.

The City's parks, open space, trails and pedestrian linkages are part of an integrated system that connect with regional and state resources and provide opportunities for residents and visitors to experience San Diego's open spaces. The Recreation Element describes the attributes of designated and dedicated park and open space lands for the provision of outdoor recreation. Some important open space areas are not preserved as dedicated park land, but are protected through regulations or other private property restrictions such as conservation or open space easements.
Open space that is designated in community plans and other land use plans is an important component of the open space system because of its value in protecting natural landforms, defining community boundaries, providing natural linkages between communities, providing visually appealing open spaces, and protecting habitat and biological systems of community importance that are not otherwise included in the MHPA.

Policies

CE-B.1. Protect and conserve the landforms, canyon lands, and open spaces that: define the City's urban form; provide public views/vistas; serve as core biological areas and wildlife linkages; are wetlands habitats; provide buffers within and between communities; or provide outdoor recreational opportunities.

a. Utilize Environmental Growth Funds and pursue additional funding for the acquisition and management of MHPA and other important community open space lands.

b. Support the preservation of rural lands and open spaces throughout the region.

c. Protect urban canyons and other important community open spaces including those that have been designated in community plans for the many benefits they offer locally, and regionally as part of a collective citywide open space system (see also Recreation Element, Sections C and F; Urban Design Element, Section A).

d. Minimize or avoid impacts to canyons and other environmentally sensitive lands, by relocating sewer infrastructure out of these areas where possible, minimizing construction of new sewer access roads into these areas, and redirecting of sewage discharge away from canyons and other environmentally sensitive lands.

e. Encourage the removal of invasive plant species and the planting of native plants near open space preserves.

f. Pursue formal dedication of existing and future open space areas throughout the City, especially in core biological resource areas of the City's adopted MSCP Subarea Plan.

g. Require sensitive design, construction, relocation, and maintenance of trails to optimize public access and resource conservation.

CE-B.2. Apply the appropriate zoning and Environmentally Sensitive Lands (ESL) regulations to limit development of floodplains, sensitive biological areas including wetlands, steep hillsides, canyons, and coastal lands.

a. Manage watersheds and regulate floodplains to reduce disruption of natural systems, including the flow of sand to the beaches. Where possible and practical, restore water filtration, flood and erosion control, biodiversity and sand replenishment benefits.

b. Limit grading and alterations of steep hillsides, cliffs and shoreline to prevent increased erosion and landform impacts.

CE-B.3. Use natural landforms and features as integrating elements in project design to complement and accentuate the City's form (see also Urban Design Element, Section A).

CE-B.4. Limit and control runoff, sedimentation, and erosion both during and after construction activity.

CE-B.5. Maximize the incorporation of trails and greenways linking local and regional open space and recreation areas into the planning and development review processes.

CE-B.6. Provide an appropriate defensible space between open space and urban areas through the management of brush, the use of transitional landscaping, and the design of structures (see also Urban Design Element, Policy UD-A.3.o). Continue to implement a citywide brush management system.

The following policies address land development practices for erosion control, decreased use of impervious surfaces, and design that captures or reduces runoff from development sites. The policies also provide a summary of the City's overall water quality protection policies.

Policies

CE-E.1. Continue to develop and implement public education programs.

a. Involve the public in addressing runoff problems associated with development and raising awareness of how an individual's activities contribute to runoff pollution.

b. Work with local businesses and developers to provide information and incentives for the implementation of Best Management Practices for pollution prevention and control.

c. Implement watershed awareness and water quality educational programs for City staff, community planning groups, the general public, and other appropriate groups.

CE-E.2. Apply water quality protection measures to land development projects early in the process-during project design, permitting, construction, and operations-in order to minimize the quantity of runoff generated on-site, the disruption of natural water flows and the contamination of storm water runoff.

a. Increase on-site infiltration, and preserve, restore or incorporate natural drainage systems into site design.

b. Direct concentrated drainage flows away from the MHPA and open space areas. If not possible, drainage should be directed into sedimentation basins, grassy swales or mechanical trapping devices prior to draining into the MHPA or open space areas.

c. Reduce the amount of impervious surfaces through selection of materials, site planning, and street design where possible.

d. Increase the use of vegetation in drainage design.

e. Maintain landscape design standards that minimize the use of pesticides and herbicides.

f. Avoid development of areas particularly susceptible to erosion and sediment loss (e.g., steep slopes) and, where impacts are unavoidable, enforce regulations that minimize their impacts.

g. Apply land use, site development, and zoning regulations that limit impacts on, and protect the natural integrity of topography, drainage systems, and water bodies.

h. Enforce maintenance requirements in development permit conditions.

CE-E.3. Require contractors to comply with accepted storm water pollution prevention planning practices for all projects.

a. Minimize the amount of graded land surface exposed to erosion and enforce erosion control ordinances.

b. Continue routine inspection practices to check for proper erosion control methods and housekeeping practices during construction.

CE-E.4. Continue to participate in the development and implementation of Watershed Management Plans for water quality and habitat protection.

CE-E.5. Assure that City departments continue to use "Best Practice" procedures so that water quality objectives are routinely implemented.

a. Incorporate water quality objectives into existing regular safety inspections.

b. Follow Best Management Practices and hold training sessions to ensure that employees are familiar with those practices.

c. Educate City employees on sources and impacts of pollutants on urban runoff and actions that can be taken to reduce these sources.

d. Ensure that contractors used by the City are aware of and implement urban runoff control programs.

e. Serve as an example to the community-at-large.

CE-E.6. Continue to encourage "Pollution Control" measures to promote the proper collection and disposal of pollutants at the source, rather than allowing them to enter the storm drain system.

a. Promote the provision of used oil recycling and/or hazardous waste recycling facilities and drop-off locations.

b. Review plans for new development and redevelopment for connections to the storm drain system.

c. Follow up on complaints of illegal discharges and accidental spills to storm drains, waterways, and canyons.

CE-E.7. Manage floodplains to address their multi-purpose use, including natural drainage, habitat preservation, and open space and passive recreation, while also protecting public health and safety.

ATTACHMENT G

San Ysidro Community Proposed Land Use Map

SAN YSIDRO COMMUNITY PLAN UPDATE

2/4/2016